



**LOUISVILLE - JEFFERSON COUNTY METRO GOVERNMENT
AIR POLLUTION CONTROL DISTRICT
TITLE V OPERATING PERMIT**

Permit No.: 145-97-TV

Plant ID: 0127

Effective Date: 1 June 2003

Expiration Date: 1 June 2008

UTM Northing: 4212.0

UTM Easting: 595.6

SIC: 4911

NAICS: 221112

AFS: 00127

Permission is hereby given by the Air Pollution Control District of Jefferson County to operate equipment located at:

**Louisville Gas & Electric Company
Mill Creek Generating Station
14660 Dixie Highway
Louisville KY 40272**

The applicable procedures of District Regulation 2.16 regarding review by the U.S. EPA and public participation have been followed in the issuance of this permit. Based on review of the application on file with the District, permission is given to operate under the conditions stipulated herein. This permit and the authorization to operate the emission units listed shall expire on midnight on the expiration date shown above. If a renewal permit is not issued prior to the expiration date, the owner or operator may continue to operate in accordance with the terms and conditions of this permit beyond the expiration date, provided that a complete renewal application is submitted to the District no earlier than eighteen (18) months and no later than one-hundred eighty (180) days prior to the expiration date.

Permit Applicant: Louisville Gas & Electric Company

Responsible Official: John N. Voyles, Jr.

Title of Responsible Official: General Manager, Cane Run, Ohio Falls, & Combustion Turbines

Date Application Received: 21 February 1997

Date Application Administratively Complete: 18 April 1997

Date Public Notice Given: 17 December 2000; 19 January 2003

Reviewing Engineer (61)

Air Pollution Control Officer

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Title V Permit Revisions/Changes

Revision No.	Date of Reissuance	Public Notice Date	Type	Emission Unit/Page No.	Description
Initial	06/01/2003	01/19/2003	Initial	Entire Permit	Entire Permit

Abbreviations and Acronyms

AC	- Additional Condition
AFS	- AIRS Facility Subsystem
AIRS	- Aerometric Information Retrieval System
APCD	- Air Pollution Control District
ASL	- Adjusted Significant Level
atm	- Atmosphere
BACT	- Best Available Control Technology
Btu	- British Thermal Unit
°C	- Degrees Centigrade
CEMS	- Continuous Emission Monitoring System
CAAA	- Clean Air Act Amendments (15 November 1990)
cf	- Cubic foot
DOE	- District Only Enforceable
°F	- Degrees Fahrenheit
gal	- Gallon
HAP	- Hazardous Air Pollutant
Hg	- Mercury
hr	- hour
lbs	- Pounds
l	- Liter
MACT	- Maximum Achievable Control Technology
m	- Meter
mg	- Milligram
mm	- Millimeter
MM	- Million
MOCS	- Management of Change System
NAICS	- North American Industry Classification System
NSR	- New Source Review
NO _x	- Nitrogen oxides
NSPS	- New Source Performance Standards
PM	- Particulate Matter
PM ₁₀	- Particulate matter less than 10 microns
ppm	- Parts per million
PSD	- Prevention of Significant Deterioration
PMP	- Preventive Maintenance Plan
psia	- Pounds per square inch absolute
RACT	- Reasonably Available Control Technology
SIC	- Standard Industrial Classification
SIP	- State Implementation Plan
SO ₂	- Sulfur dioxide
TAL	- Threshold Ambient Limit
TAP	- Toxic Air Pollutant
tpy	- Tons per year
VOC	- Volatile Organic Compound
UTM	- Universal Transverse Mercator

Preamble

Title V of the Clean Air Act Amendments of 1990 required EPA to create an operating permit program for implementation by state or local air permitting authorities. The purposes of this program are (1) to require an affected company to assume full responsibility for demonstrating compliance with applicable regulations; (2) to capture all of the regulatory information pertaining to an affected company in a single document; and (3) to make permits more consistent with each other.

A company is subject to the Title V program if it meets any of several criteria related to the nature or amount of its emissions. The Title V operating permit specifies what the affected company is, how it may operate, what its applicable regulations are, how it will demonstrate compliance, and what is required if compliance is not achieved. In Jefferson County, Kentucky, the Air Pollution Control District (APCDJC) is responsible for issuing Title V permits to affected companies and enforcing local regulations and delegated federal and state regulations. EPA may enforce federal regulations but not "District Only Enforceable Regulations".

Title V offers the public an opportunity to review and comment on a company's draft permit. It is intended to help the public understand the company's compliance responsibility under the Clean Air Act. Additionally, the Title V process provides a mechanism to incorporate new applicable requirements. Such requirements are available to the public for review and comment before they are adopted.

Title V Permit general conditions define requirements which are generally applicable to all Title V companies under the jurisdiction of APCDJC. This avoids repeating these requirements in every section of the company's Title V permit. Company-specific conditions augment the general conditions as necessary; these appear in the sections of the permit addressing individual emission units or emission points.

The general conditions include references to regulatory requirements that may not currently apply to the company, but which provide guidance for potential changes at the company or in the regulations during the life of the permit. Such requirements may become applicable if the company makes certain modifications or a new applicable requirement is adopted.

When the applicability of a section or subpart of a regulation is unclear, a clarifying citation will be made in the company's Title V permit at the emission unit/point level. Comments may also be added at the emission unit/point level to give further clarification or explanation.

The source's Title V permit may include a list of "insignificant activities," as defined in District Regulation 2.16, section 1.22 which was current as of the date the permit was proposed for review by USEPA, Region 4. Activities so identified may be insignificant with regard to application disclosure requirements but may still have generally applicable requirements that continue to apply. No periodic monitoring shall be required for facilities designated as insignificant activities.

General Conditions

1. **Compliance** - The owner or operator shall comply with all applicable requirements and with all terms and conditions of this permit. Any noncompliance shall constitute a violation of the Act, State and District regulations and shall cause the source to be subject to enforcement actions including, but not limited to, the termination, revocation and reissuance, or revision of this permit, or denial of a permit application to renew this permit. Notwithstanding any other provision in the Jefferson County portion of the Kentucky SIP approved by EPA, any credible evidence may be used for the purpose of establishing whether the owner or operator is in compliance with, has violated, or is in violation of any such plan. (Regulation 2.16, sections 4.1.3, 4.1.13.1 and 4.1.13.7)

2. **Compliance Certification** - The owner or operator shall certify, annually or more frequently if required in applicable regulations, compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. This certification shall meet the requirements of Regulation 2.16, sections 3.5.11 and 4.3.5. The owner or operator shall submit the annual compliance certification directly to the following address as well as to the District, as set forth in Regulation 2.16, section 4.3.5.4:

*US EPA - Region IV
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth Street
Atlanta, GA 30303-8960*

3. **Compliance Schedule** - A compliance schedule must meet the requirements of Regulation 2.16, section 3.5.9.5. The owner or operator shall submit a schedule of compliance for each emission unit that is not in compliance with all applicable requirements. A schedule of compliance shall be supplemental to, and shall not condone noncompliance with, the applicable requirements on which it is based. For each schedule of compliance, the owner or operator shall submit certified progress reports at least semi-annually, or at a more frequent period if specified in an applicable requirement or by the District in accordance with Regulation 2.16 section 4.3.4. The progress reports shall contain:
 - a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when activities, milestones, or compliance were achieved.
 - b. An explanation of why dates in the schedule of compliance were not or will not be met, and preventive or corrective measures adopted.

4. **Duty to Supplement or Correct Application** - If the owner or operator fails to submit relevant facts or has submitted incorrect information in the permit application, it shall, upon discovery of the occurrence, promptly submit the supplementary facts or corrected information in accordance with Regulation 2.16, section 3.4.

5. **Emergency Provision**

- a. An emergency shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emission limitations. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - i. An emergency occurred and that the owner or operator can identify the cause of the emergency.
 - ii. The permitted facility was at the time being properly operated.
 - iii. During the period of the emergency the owner or operator expeditiously took all reasonable steps, consistent with safe operating practices, to minimize levels of emissions that exceeded the emission standards or other requirements in this permit.
 - iv. The owner or operator submitted notice meeting the requirements of Regulation 1.07 of the time when emissions limitations were exceeded because of the emergency. This notice must fulfill the requirement of this condition, and must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.
- b. In an enforcement proceeding, the owner or operator seeking to establish the occurrence of an emergency has the burden of proof.
- c. This condition is in addition to any emergency or upset provision contained in an applicable requirement. (Regulation 2.16, sections 4.7.1 through 4.7.4)

6. **Emission Fees Payment Requirements** - The owner or operator shall pay annual emission fees in accordance with Regulation 2.08. Failure to pay the emissions fees when due shall constitute a violation of District Regulations. Such failure is subject to penalties and an increase in the fee of an additional 5% per month up to a maximum of 25% of the original amount due. In addition, failure to pay emissions fees within 60 days of the due date shall automatically suspend this permit to operate until the fee is paid or a schedule for payment acceptable to the District has been established. (Regulation 2.08, section 1.3)

7. **Emission Offset Requirements** - The owner or operator shall comply with the requirements of Regulation 2.04.

8. **Enforceability Requirements** - Except for the conditions that are specifically designated as "District Only Enforceable Conditions", all terms and conditions of this permit, including any provisions designed to limit a source's potential to emit, are enforceable by EPA and citizens as specified under the Act. (Regulation 2.16, sections 4.2.1 and 4.2.2)

9. **Enforcement Action Defense**

- a. It shall not be a defense for the owner or operator in an enforcement action that it would have been necessary for the owner or operator to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- b. The owner or operator's failure to halt or reduce activity may be a mitigating factor in assessing penalties for noncompliance if the health, safety or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operation. (Regulation 2.16, sections 4.1.13.2 and 4.1.13.3)

10. **Hazardous Air Pollutants and Sources Categories** - The owner or operator shall comply with the applicable requirements of Regulations 5.02 and 5.14.

11. **Information Requests** - The owner or operator shall furnish to the District, within a reasonable time, information requested in writing by the District, to determine whether cause exists for revising, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The owner or operator shall also furnish, upon request, copies of records required to be kept by this permit. (Regulation 2.16, section 4.1.13.6) If information is submitted to the District under a claim of confidentiality, the source shall submit a copy of the confidential information directly to EPA. (Regulation 2.07, section 10.2)

12. **Insignificant Activities** - The owner or operator shall notify the District in a timely manner of any proposed change to an insignificant activity that would require a permit revision. (Regulation 2.16, Section 5)

13. **Inspection and Entry** - Upon presentation of credentials and other documents as required by law, the owner or operator shall allow the District or an authorized representative to perform the following during reasonable hours:

- a. Enter the premises to inspect any emissions-related activity or records required in this permit.
- b. Have access to and copy records required by this permit.
- c. Inspect facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required by this permit.
- d. Sample or monitor substances or parameters to assure compliance with this permit or any applicable requirements. (Regulation 2.16, section 4.3.2)

14. **Monitoring and Related Record Keeping and Reporting Requirements** - The owner or operator shall comply with the requirements of Regulation 2.16, section 4.1.9. The owner or operator shall submit all required monitoring reports at least once every six months, unless more frequent reporting is required by an applicable requirement. The reporting period shall be January 1st through June 30th and July 1st through December 31st of each

calendar year. All reports shall be postmarked by the 60th day following the end of each reporting period. If surrogate operating parameters are monitored and recorded in lieu of emission monitoring, then an exceedance of multiple parameters may be deemed a single violation by the District for enforcement purposes.

15. **Off-permit Documents** - Any applicable requirements, including emission limitations, control technology requirements, or work practice standards, contained in an off-permit document cannot be changed without undergoing the permit revision procedures in Regulation 2.16, Section 5. (Regulation 2.16, section 4.1.5)
16. **Operational Flexibility** - The owner or operator may make changes without permit revision in accordance with Regulation 2.16, section 5.8.
17. **Permit Amendments (Administrative)** - This permit can be administratively amended by the District in accordance with Regulation 2.16, sections 2.3 and 5.4.
18. **Permit Application Submittal** - The owner or operator shall submit a timely and complete application for permit renewal or significant revision. If the owner or operator submits a timely and complete application then the owner or operator's failure to have a permit is not a violation until the District takes formal action on this permit application. This protection shall cease to apply if, subsequent to completeness determination, the owner or operator fails to submit, by the deadline specified in writing by the District, additional information required to process the application as required by Regulation 2.16, sections 3 and 5.2.
19. **Permit Duration** - This permit is issued for a fixed term of 5 years, in accordance with Regulation 2.16, section 4.1.8.3.
20. **Permit Renewal, Expiration and Application** - Permit renewal, expiration and application procedural requirements shall be in accordance with Regulation 2.16, sections 4.1.8.2 and 5.3. This permit may only be renewed in accordance with section 5.3.
21. **Permit Revisions** - No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit. (Regulation 2.16, section 4.1.16)
22. **Permit Revision Procedures (Minor)** - Except as provided in 40 CFR Part 72, the Acid Rain Program, this permit may be revised in accordance with Regulation 2.16, section 5.5.
23. **Permit Revision Procedures (Significant)** - A source seeking to make a significant permit revision shall meet all the Title V requirements for permit applications, issuance and renewal, in accordance with Regulation 2.16, section 5.7, and all other applicable District Regulations.
24. **Permit Revocation and Termination by the District** - The District may terminate this permit only upon written request of the owner or operator. The District may revoke a permit for cause, in accordance with Regulation 2.16, section 5.11.1.1 through 5.11.1.5. For

purposes of Section 5, substantial or unresolved noncompliance includes, but is not limited to:

- a. Knowingly operating process or air pollution control equipment in a manner not allowed by an applicable requirement or that results in excess emissions of a regulated air pollutant that would endanger the public or the environment.
 - b. Failure or neglect to furnish information, analyses, plans, or specifications required by the District.
 - c. Knowingly making any false statement in any permit application.
 - d. Noncompliance with Regulation 1.07, section 4.2; or
 - e. Noncompliance with KRS Chapter 77.
25. **Permit Shield** - The permit shield shall apply in accordance with Regulation 2.16, section 4.6.1.
 26. **Prevention of Significant Deterioration of Air Quality** - The owner or operator shall comply with the requirements of Regulation 2.05.
 27. **Property Rights** - This permit shall not convey property rights of any sort or grant exclusive privileges in accordance with Regulation 2.16, section 4.1.13.5.
 28. **Public Participation** - Except for modifications qualifying for administrative permit amendments or minor permit revision procedures, all permit proceedings shall meet the requirements of Regulations 2.07, Section 1; and 2.16, sections 5.1.1.2 and 5.5.4.
 29. **Reopening For Cause** - This permit shall be reopened and revised by the District in accordance with Regulation 2.16 section 5.9.
 30. **Reopening for Cause by EPA** - This permit may be revised, revoked and reissued or terminated for cause by EPA in accordance with Regulation 2.16 section 5.10.
 31. **Risk Management Plan (112(r))** - For each process subject to Section 112(r) of the Act, the owner or operator shall comply with 40 CFR Part 68 and Regulation 5.15.
 32. **Severability Clause** - The conditions of this permit are severable. Therefore, if any condition of this permit, or the application of any condition of this permit to any specific circumstance, is determined to be invalid, the application of the condition in question to other circumstances, as well as the remainder of this permit's conditions, shall not be affected. (Regulation 2.16, section 4.1.12)
 33. **Stack Height Considerations** - The owner or operator shall comply with the requirements of Regulation 2.10.

34. **Startups, Shutdowns, and Malfunctions Requirements** - The owner or operator shall comply with the requirements of Regulation 1.07.

35. **Submittal of Reports, Data, Notifications, and Applications**

a. Applications, reports, test data, monitoring data, compliance certifications, and any other document required by this permit as set forth in Regulation 2.16 sections 3.1, 3.4, 3.5, 4.1.13.6, 5.8.5 and 5.11.7 shall be submitted to:

***Air Pollution Control District of Jefferson County
850 Barret Ave
Louisville, KY 40204-1745***

b. Documents which are specifically required to be submitted to EPA as set forth in Regulation 2.16 sections 3.3, and 5.8.5 shall be mailed to EPA at the following address:

***US EPA - Region IV
APTMD - 12th floor
Atlanta Federal Center
61 Forsyth Street
Atlanta, GA 30303-3104***

36. **Other Applicable Regulations** - The owner or operator shall comply with all applicable requirements of the following regulations:

FEDERALLY ENFORCEABLE REGULATIONS	
Regulation	Title
1.01	General Application of Regulations and Standards
1.02	Definitions
1.03	Abbreviations and Acronyms
1.04	Performance Tests
1.05	Compliance with Emission Standards and Maintenance Requirements
1.06	Source Self-Monitoring and Reporting
1.07	Emissions During Startups, Shutdowns, Malfunctions, and Emergencies
1.08	Administrative Procedures
1.09	Prohibition of Air Pollution
1.10	Circumvention
1.11	Control of Open Burning
1.14	Control of Fugitive Particulate Emissions
2.01	General Application
2.02	Air Pollution Regulation Requirements and Exemptions

FEDERALLY ENFORCEABLE REGULATIONS	
Regulation	Title
2.03	Permit Requirements - Non-Title V Construction and Operating Permits and Demolition/Renovation Permits
2.07	Public Notification for Title V, PSD, and Offset Permits; SIP Revisions; and Use of Emission Reduction Credits
2.09	Causes for Permit Suspension
2.10	Stack Height Considerations
2.11	Air Quality Model Usage
2.16	Title V Operating Permits
4.01	General Provisions for Emergency Episodes
4.02	Episode Criteria
4.03	General Abatement Requirements
4.07	Episode Reporting Requirements
5.01	General Provisions (for Hazardous Air Pollutants)
5.03	Potential Hazardous Emissions
6.01	General Provisions (for <i>Existing Affected Facilities</i>)
6.02	Emission Monitoring for Existing Sources
7.01	General Provisions (for <i>New Affected Facilities</i>)

DISTRICT ONLY ENFORCEABLE REGULATIONS	
Regulation	Title
1.12	Control of Nuisances
1.13	Control of Objectionable Odors in the Ambient Air
2.08	Emissions Fees, Permit Fees, Permit Renewal Procedures, and Additional Programs Fees
8.03	Commuter Vehicle Testing Requirements

37. **Stratospheric Ozone Protection Requirements** - Any facility having refrigeration equipment, including air conditioning equipment, which uses a Class I or II substance (listed in 40 CFR 82, Subpart A, Appendices A and B), and any facility which maintains, services, or repairs motor vehicles using a Class I or II substance as refrigerant must comply with all requirements of 40 CFR 82, Subparts A, B, and F. Those requirements include the following restrictions:

- a. Any facility having any refrigeration equipment normally containing fifty (50) pounds of refrigerant, or more, must keep servicing records documenting the date and type of all service and the quantity of any refrigerant added according to 40 CFR 82.166;

- b. No person repairing or servicing a motor vehicle may perform any service on a motor vehicle air conditioner (MVAC) involving the refrigerant for such air conditioner unless the person has been properly trained and certified as provided in 40 CFR 82.34 and 40 CFR 82.40, and properly uses equipment approved according to 40 CFR 82.36 and 40 CFR 82.38, and complies with 40 CFR 82.42;
- c. No person may sell or distribute, or offer for sale or distribution, any substance listed as a Class I or II substance in 40 CFR 82, Subpart A, Appendices A and B, except in compliance with 40 CFR 82.34(b), 40 CFR 82.42, and/or 40 CFR 82.166.
- d. No person maintaining, servicing, repairing, or disposing of appliances may knowingly vent or otherwise release into the atmosphere any Class I or II substance used as a refrigerant in such equipment and no other person may open appliances (except MVACs as defined in 40 CFR 82.152) for service, maintenance, or repair unless the person has been properly trained and certified according to 40 CFR 82.161 and unless the person uses equipment certified for that type of appliance according to 40 CFR 82.158 and unless the person observes the practices set forth in 40 CFR 82.156 and 40 CFR 82.166;
- e. No person may dispose of appliances (except small appliances, as defined in 40 CFR 82.152) without using equipment certified for that type of appliance according to 40 CFR 82.158 and without observing the practices set forth in 40 CFR 82.156 and 40 CFR 82.166;
- f. No person may recover refrigerant from small appliances, MVACs and MVAC-like appliances (as defined in 40 CFR 82.152), except in compliance with the requirements of 40 CFR 82 Subpart F;
- g. If the permittee manufactures, transforms, imports, or exports, a Class I or II substance (listed in 40 CFR 82, Subpart A, Appendices A and B), the permittee is subject to all requirements as specified in 40CFR82 Subpart A, Production and Consumption Controls.

(Regulation 2.16, section 4.1.5)

Emission Unit U-1 Description: Unit 1 steam generator for electric power generation

Applicable Regulations:

Federally Enforceable Regulations		
Regulation	Title	Applicable Sections
6.02	Emission Monitoring for Existing Sources	1, 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18
6.07	Standards of Performance for Existing Indirect Heat Exchangers	1, 2, 3, 4
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5
6.42	Reasonably Available Control Technology Requirements for Major Volatile Organic Compound- and Nitrogen Oxides-Emitting Facilities	1, 2, 3, 4, 5
6.47	Federal Acid Rain Program for Existing Sources Incorporated by Reference	1, 2, 3, 4, 5
40 CFR Part 72	Permits Regulation	Subparts A, B, C, D, E, F, G, H, I
40 CFR Part 73	Sulfur Dioxide Allowance System	Subparts A, B, C, D, E, F, G
40 CFR Part 75	Continuous Emission Monitoring	Subparts A, B, C, D, E, F, G
40 CFR Part 76	Acid Rain Nitrogen Oxides Emission Reduction Program	76.1, 76.2, 76.3, 76.4, 76.5, 76.7, 76.8, 76.9, 76.11, 76.13, 76.14, 76.15, Appendix A, Appendix B
40 CFR Part 77	Excess Emissions	77.1, 77.2, 77.3, 77.4, 77.5, 77.6
40 CFR Part 78	Appeals Procedures for Acid Rain Program	78.1, 78.2, 78.3, 78.4, 78.5, 78.6, 78.8, 78.9, 78.10, 78.11, 78.13, 78.14, 78.15, 78.16, 78.17, 78.18, 78.19, 78.20

Allowable Emissions:

Pollutant	Standard
PM	See Additional Condition 1.c.
Opacity	See Additional Condition 1.d.
NO _x	See Additional Condition 1.a.
SO ₂	See Additional Condition 1.b.

Components:

- E-1 Tangentially fired boiler, nominal design rating of 3,085 MMBtu per hour, using pulverized coal as a primary fuel. Secondary fuel is natural gas. Control devices: C1 (Electrostatic precipitator) for PM and C2 (Flue Gas Desulfurization (FGD)) for SO₂
- E-2 Coal bunker with particulate control device C3 (Dry centrifugal dust collector)

Additional Conditions

1. **Standards** (Regulation 2.16, section 4.1.1)
 - a. **NO_x**
 - i. For Emission Point E-1, the owner or operator shall not allow NO_x emissions to exceed 0.45 lb/MMBtu of heat input on an annual average basis. Title IV, Phase II, Acid Rain Permit (No.176-97-AR) is attached and considered part of this Title V Operating Permit. (Regulation 6.47, section 3.5 referencing 40 CFR Part 76)
 - ii. For Emission Point E-1, the owner or operator shall not exceed the NO_x RACT emissions standard of 0.47 lb/MMBtu of heat input based on a rolling 30-day average. The owner or operator shall comply with the NO_x RACT Plan attached and considered part of this Title V Operating Permit. (See NO_x RACT Attachment) (Regulation 6.42, section 4.3)
 - b. **SO₂**
 - i. For Emission Point E-1, the owner or operator shall not exceed 1.2 lb/MMBtu per hour heat input based on a three hour rolling average. (Regulation 6.07, section 4.1)
 - ii. For Emission Point E-1, the Title IV, Phase II, Acid Rain Permit No.176-97-AR is attached and considered part of this Title V Operating Permit. (Regulation 6.47, section 3.2 referencing 40 CFR Part 73, Acid Rain Allowances are specified in Table 2)
 - c. **PM**
 - i. For Emission Point E-1, the owner or operator shall not exceed an allowable particulate emission rate of 0.11 lbs/MMBtu heat input based on a three hour rolling average. (Regulation 6.07, section 3.1)
 - ii. For Emission Point E-2, the owner or operator shall not exceed an allowable particulate emission rate of 82.95 lbs/hr. (Regulation 6.09, section 3.2)
 - d. **Opacity**
 - i. For Emission Point E-1, no owner or operator shall cause the emission into the open air of particulate matter from any indirect heat exchanger which is greater than 20% opacity, except emissions into the open air of particulate matter from any indirect heat exchanger during building a new fire, cleaning the fire box, or blowing soot for a period or periods aggregating not more than ten minutes in any 60 minutes which are less than 40% opacity. (Regulation 6.07, section 3.2 and 3.3)

- ii. For Emission Point E-2, the owner or operator shall not cause, suffer, allow, or permit any gases that contain particulate matter that is equal to or greater than 20% opacity. (Regulation 6.09, section 3.1)

2. **Monitoring** (Regulation 2.16, section 4.1.9.1)

a. **NO_x**

- i. For Emission Point E-1, the owner or operator shall install, maintain, calibrate and operate a continuous emission monitoring system (CEMS) for the measurement or calculation of nitrogen oxides in the flue gas. (Regulation 6.02, section 6.1.3, NO_x RACT Plan and Regulation 6.47, section 3.4 referencing 40 CFR 75.10(a)(2))
- ii. For Emission Point E-1, the owner or operator shall maintain and operate District approved NO_x RACT control technology in accordance with good engineering practice and the manufacturer's specifications. (Regulation 6.42, section 4.3)
- iii. For Emission Point E-1, the owner or operator shall demonstrate compliance with NO_x RACT Plan limits by continuous emissions monitors (CEMs) as specified in the NO_x RACT Plan attached and incorporated into this permit. (See NO_x RACT Attachment) (Regulation 6.42, section 4.3)

b. **SO₂**

- i. For Emission Point E-1, the owner or operator shall install, maintain, calibrate and operate a continuous emission monitoring system (CEM) for the measurement of sulfur dioxide in the flue gas. (Regulation 6.02, section 6.1.2 and Regulation 6.47, section 3.4 referencing 40 CFR 75.10(a)(1))
- ii. For Emission Point E-1, the owner or operator shall comply with acid rain requirements specified in 40 CFR Part 73 Table 2. (Regulation 6.47, section 3.2 referencing 40 CFR Part 73, Acid Rain Allowances are specified in Table 2)

c. **PM**

- i. For Emission Point E-1, the owner or operator shall conduct annual EPA Reference Method 5 performance tests for particulate matter and monitor the ESP and wet scrubber daily as specified in Additional Condition 2.d.i.[3) and 4)].
- ii. There are no monitoring requirements for emission point E-2. (See Comment 4)

d. **Opacity**

- i. For Emission Point E-1:
- 1) The owner or operator shall determine the opacity of emissions from the stack by EPA Reference Method 9 weekly, by starting daily (Monday through Friday) at the beginning of the week to attempt to get a valid EPA Reference Method 9 test completed during that week. If the plumes are combined, an opacity reading shall be taken for informational purposes and it shall specify which plumes were combined to produce that opacity value, this combined plume reading will not count as a valid reading.
 - 2) The owner or operator shall, using the initial PM performance test, correlate the data with opacity data obtained during the test to establish an alternate opacity trigger level. If excluding any opacity exemptions, any six minute average opacity value exceeds the trigger level, the owner or operator shall initiate an inspection of the process equipment, the control equipment and/or COM system and make any necessary repairs. If five percent or greater of the COM data (excluding exemptions) recorded in a calendar quarter show excursions above the trigger level, the owner or operator shall perform an EPA Reference Method 5 stack test in the following quarter. The District may waive this testing requirement upon demonstration that the cause(s) of the excursions have been corrected.
 - 3) The owner or operator shall monitor daily the following for the wet scrubber:
 - a) Recycle Pump Amps must be > 10 Amps
 - b) Recycle Pump On/Off Indication must be On
 - c) Reaction Tank pH must be >4.0 pH
 - d) CEM Stack Exit Temperature must be between $100-170^{\circ}\text{F}$
 - 4) The owner or operator shall monitor daily the following for the Electrostatic Precipitator (ESP):
 - a) Precipitator Transformer/Rectifier Availability must be $\geq 68\%$
 - b) Precipitator Secondary Kilowatts (KW) must be ≥ 2 KW
 - 5) The owner or operator shall install, maintain, calibrate and test a continuous extractive opacity emission monitoring system in one stack at LG&E Mill Creek, Cane Run, or Trimble Co before June 30, 2004.

If the continuous extractive opacity monitoring system is approved by the District and EPA, then one stack at LG&E Mill Creek shall be equipped with the extractive opacity monitoring system by October 31, 2004. Then every 3 months thereafter (January 31, 2005, April

30, 2005, and July 31, 2005), an additional stack will be equipped with the extractive opacity monitoring system. Also, if the continuous extractive opacity monitoring system is approved by the District and EPA, then Additional Conditions 2.d.i.1) and 2.d.i.2) will be superseded by Additional Condition 2.d.i.5); Or,

If the continuous extractive opacity monitoring system is not approved, one stack at LG&E Mill Creek shall be equipped with four COMs by October 31, 2004, and then every 3 months thereafter (January 31, 2005, April 30, 2005, and July 31, 2005), an additional stack will be equipped with four COMs.

- ii. For Emission Point E-2, the owner or operator shall conduct a weekly one-minute visible emissions survey, during normal operation and daylight hours, of the PM Emission Points (stacks). For Emission Points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to conduct a monthly one-minute visible emission survey, during normal operation and daylight hours. At Emission Points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9 for stack emissions within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, according to Regulation 1.07, and take all practicable steps to eliminate the exceedance.

3. **Record Keeping** (Regulation 2.16, section 4.1.9.2)

a. **NO_x**

- i. For Emission Point E-1, the owner or operator shall keep a record identifying all deviations from the requirements of the NO_x RACT Plan.
- ii. For Emission Point E-1, the owner or operator shall comply with the NO_x compliance plan requirements specified in the attached Acid Rain Permit, No.176-97-AR. These record keeping requirements shall be determined in accordance with the Title IV Phase II Acid Rain Permit and are specified in 40 CFR Part 75 Subpart F and 40 CFR Part 76 section 76.14. (Regulation 6.47, section 3.4 and 3.5 referencing 40 CFR Parts 75 and 76)
- iii. For Emission Point E-1, the owner or operator shall record on an hourly basis all NO_x emission data specified in 40 CFR Part 75 section 75.50(d).

b. **SO₂**

- i. For Emission Point E-1, the owner or operator shall maintain hourly records of SO₂ emissions as specified in Regulation 6.02, section 6.1.2.

- ii. For Emission Point E-1, the owner or operator shall comply with the SO₂ recordkeeping requirements in the Acid Rain Permit No.176-97-AR. This permit is attached and considered part of this Title V Operating Permit. (Regulation 6.47, section 3.2 and 3.4 referencing 40 CFR Parts 73 and 75)
 - iii. For Emission Point E-1, the owner or operator shall record on an hourly basis all SO₂ emission data specified in 40 CFR 75.50(c).
- c. **PM**
- i. For Emission Point E-1, the owner or operator shall keep a record of each Method 5 test performed.
 - ii. For Emission Point E-2, there are no record keeping requirements for this emission point.(See Comment 3)
- d. **Opacity**
- i. For Emission Point E-1:
 - 1) The owner or operator shall record every six minutes the COM output.
 - 2) The owner or operator shall keep a record of every Method 9 test performed or the reason why it could not be performed that day and a record of every combined plume opacity reading.
 - 3) The owner or operator shall keep a daily record of each parameter that is required to be monitored in Additional Condition 2.d.i.3) and 2.d.i.4).
 - 4) The owner or operator shall keep a record of the output of the continuous extractive opacity monitor.
 - ii. For Emission Point E-2, records of the results of all visible emission surveys and tests performed shall be maintained and shall include the date and time of the survey; the name of the person conducting the survey; whether visible emissions were observed, and a description of any corrective action taken.
4. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall clearly identify all deviations from permit requirements in the quarterly reports. All reports shall be certified by a responsible official as defined in Regulation 2.16, section 2.36. If no deviations occur in that reporting period then the owner or operator shall report a negative declaration for each of the following categories. The owner or operator shall report quarterly the following:

a. NO_x**i. For Emission point E-1:**

- 1) Emission Unit ID number, Stack ID number, and/or Emission point ID number,
- 2) The beginning and ending date of the reporting period,
- 3) Identification of all periods during which a deviation occurred,
- 4) A description, including the magnitude, of the deviation,
- 5) If known, the cause of the deviation, and
- 6) Description of any corrective action taken for each deviation.

ii. For Emission point E-1, a written report of excess emissions and the nature and cause of the excess emissions if known. The minimum data requirements for these reports are outlined in Regulation 6.02 section 16.1.

iii. For Emission point E-1, reporting requirements for the Title IV Phase II Acid Rain Permit are specified in 40 CFR Part 75 Subpart G. Notifications, Monitoring Plans, Initial Certification and Recertification Applications, Quarterly Reports, Opacity Reports, Petitions to the Administrator, and Retired Unit Petitions shall be submitted as specified in Subpart G-Reporting Requirements.

b. SO₂

i. For Emission point E-1, a written report of excess emissions and the nature and cause of the excess emissions if known. The minimum data requirements for these reports are outlined in Regulation 6.02 Section 16. (Regulation 6.02 section 16.1)

ii. For Emission point E-1, reporting requirements for the Title IV Phase II Acid Rain Permit are specified in 40 CFR Part 75 Subpart G. Notifications, Monitoring Plans, Initial Certification and Recertification Applications, Quarterly Reports, Opacity Reports, Petitions to the Administrator, and Retired Unit Petitions shall be submitted as specified in Subpart G-Reporting Requirements.

c. PM

i. For Emission Point E-1, the owner or operator shall submit the results of the annual Method 5 stack test within 60 days of the completion of the test.

ii. For Emission Point E-2, there are no compliance reporting requirements for this pollutant.

d. Opacity

- i. For emission point E-1:
 - 1) Emission Unit ID number, Stack ID number, and/or Emission point ID number,
 - 2) The beginning and ending date of the reporting period,
 - 3) Any Method 9 that exceeds the standard,
 - 4) A description, including the magnitude, of the deviation,
 - 5) If known, the cause of the deviation, and
 - 6) Description of any corrective action taken for each deviation.

- ii. For emission point E-1:
 - 1) Emission Unit ID number, Stack ID number, and/or Emission point ID number,
 - 2) The beginning and ending date of the reporting period,
 - 3) Any parameter that exceeds the given ranges,
 - 4) A description, including the magnitude, of the deviation,
 - 5) If known, the cause of the deviation, and
 - 6) Description of any corrective action taken for each deviation.

- iii. For emission point E-1, reporting requirements for the Title IV Phase II Acid Rain Permit are specified in 40 CFR Part 75 Subpart G. Notifications, Monitoring Plans, Initial Certification and Recertification Applications, Quarterly Reports, Opacity Reports, Petitions to the Administrator, and Retired Unit Petitions shall be submitted as specified in Subpart G-Reporting Requirements.

- iv. For Emission Point E-2:
 - 1) Emission Unit ID number, Stack ID number, and/or Emission point ID number
 - 2) The beginning and ending date of the reporting period
 - 3) The date, time and results of each exceedance of the opacity standard
 - 4) Description of any corrective action taken for each exceedance

Comments

1. For emission point E-1, the owner or operator has exercised the Acid Rain Program early election option and is required to limit NO_x emissions from E-1 to 0.45 lb/MMBtu of heat input on an annual average basis, beginning on January 1, 1997 and continuing through December 31, 2007.

2. The NO_x RACT requirements for E-1 are met by use of Low NO_x Burners (LNB) with Overfire Air (OA). NO_x performance tests are not required under District Regulation 6.42 as CEMs are being used to demonstrate compliance.

3. For Emission Point E-2, the owner or operator has shown, by worst-case calculations without allowance for a control device, that the hourly uncontrolled PM emission standard cannot be exceeded; therefore, no additional monitoring, recordkeeping, or reporting is required to demonstrate compliance with the applicable PM standards specified in Regulation 6.09 is required for this emission point.

4. Louisville Gas & Electric Company is not subject to the requirements of 40 CFR 63, Subpart Q as no chromium-based water treatment chemicals have been introduced into any cooling tower located within the plant boundaries, prior to and after the effective date of Subpart Q, in accordance with LG&E letter, dated June 23, 1998.

Emission Unit U-2 Description: Unit 2 steam generator for electric power generation

Applicable Regulations:

Federally Enforceable Regulations		
Regulation	Title	Applicable Sections
6.02	Emission Monitoring for Existing Sources	1, 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18
6.07	Standards of Performance for Existing Indirect Heat Exchangers	1, 2, 3, 4
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5
6.42	Reasonably Available Control Technology Requirements for Major Volatile Organic Compound- and Nitrogen Oxides-Emitting Facilities	1, 2, 3, 4, 5
6.47	Federal Acid Rain Program for Existing Sources Incorporated by Reference	1, 2, 3, 4, 5
40 CFR Part 72	Permits Regulation	Subparts A, B, C, D, E, F, G, H, I
40 CFR Part 73	Sulfur Dioxide Allowance System	Subparts A, B, C, D, E, F, G
40 CFR Part 75	Continuous Emission Monitoring	Subparts A, B, C, D, E, F, G
40 CFR Part 76	Acid Rain Nitrogen Oxides Emission Reduction Program	76.1, 76.2, 76.3, 76.4, 76.5, 76.7, 76.8, 76.9, 76.11, 76.13, 76.14, 76.15, Appendix A, Appendix B
40 CFR Part 77	Excess Emissions	77.1, 77.2, 77.3, 77.4, 77.5, 77.6
40 CFR Part 78	Appeals Procedures for Acid Rain Program	78.1, 78.2, 78.3, 78.4, 78.5, 78.6, 78.8, 78.9, 78.10, 78.11, 78.13, 78.14, 78.15, 78.16, 78.17, 78.18, 78.19, 78.20

Allowable Emissions:

Pollutant	Standard
PM	See Additional Condition 1.c.
Opacity	See Additional Condition 1.d.
NO _x	See Additional Condition 1.a.
SO ₂	See Additional Condition 1.b.

Components:

- E-3 Tangentially fired boiler, nominal design rating of 3,085 MMBtu per hour, using pulverized coal as a primary fuel. Secondary fuel is natural gas. Control devices: C4 (Electrostatic precipitator) for PM and C5 (Flue Gas Desulfurization (FGD)) for SO₂
- E-4 Coal bunker with particulate control device C6 (Dry centrifugal dust collector)

Additional Conditions

1. **Standards** (Regulation 2.16, section 4.1.1)
 - a. **NO_x**
 - i. For Emission Point E-3, the owner or operator shall not allow NO_x emissions to exceed 0.45 lb/MMBtu of heat input on an annual average basis. Title IV, Phase II, Acid Rain Permit (No.176-97-AR) is attached and considered part of this Title V Operating Permit. (Regulation 6.47, section 3.5 referencing 40 CFR Part 76)
 - ii. For Emission Point E-3, the owner or operator shall not exceed the NO_x RACT emissions standard of 0.47 lb/MMBtu of heat input based on a rolling 30-day average. The owner or operator shall comply with the NO_x RACT Plan attached and considered part of this Title V Operating Permit. (See NO_x RACT Attachment) (Regulation 6.42, section 4.3)
 - b. **SO₂**
 - i. For Emission Point E-3, the owner or operator shall not exceed 1.2 lb/MMBtu per hour heat input based on a three hour rolling average. (Regulation 6.07, section 4.1)
 - ii. For Emission Point E-3, the Title IV, Phase II, Acid Rain Permit No.176-97-AR is attached and considered part of this Title V Operating Permit. (Regulation 6.47, section 3.2 referencing 40 CFR Part 73, Acid Rain Allowances are specified in Table 2)
 - c. **PM**
 - i. For Emission Point E-3, the owner or operator shall not exceed an allowable particulate emission rate of 0.11 lbs/MMBtu heat input based on a three hour rolling average. (Regulation 6.07, section 3.1)
 - ii. For Emission Point E-4, the owner or operator shall not exceed an allowable particulate emission rate of 82.95 lbs/hr. (Regulation 6.09, section 3.2)
 - d. **Opacity**
 - i. For Emission Point E-3, no owner or operator shall cause the emission into the open air of particulate matter from any indirect heat exchanger which is greater than 20% opacity, except emissions into the open air of particulate matter from any indirect heat exchanger during building a new fire, cleaning the fire box, or blowing soot for a period or periods aggregating not more than ten minutes in any 60 minutes which are less than 40% opacity. (Regulation 6.07, section 3.2 and 3.3)

- ii. For Emission Point E-4, the owner or operator shall not cause, suffer, allow, or permit any gases that contain particulate matter that is equal to or greater than 20% opacity. (Regulation 6.09, section 3.1)

2. **Monitoring** (Regulation 2.16, section 4.1.9.1)

a. **NO_x**

- i. For Emission Point E-3, the owner or operator shall install, maintain, calibrate and operate a continuous emission monitoring system (CEMS) for the measurement or calculation of nitrogen oxides in the flue gas. (Regulation 6.02, section 6.1.3, NO_x RACT Plan and Regulation 6.47, section 3.4 referencing 40 CFR 75.10(a)(2))
- ii. For Emission Point E-3, the owner or operator shall maintain and operate District approved NO_x RACT control technology in accordance with good engineering practice and the manufacturer's specifications. (Regulation 6.42, section 4.3)
- iii. For Emission Point E-3, the owner or operator shall demonstrate compliance with NO_x RACT Plan limits by continuous emissions monitors (CEMs) as specified in the NO_x RACT Plan attached and incorporated into this permit. (See NO_x RACT Attachment) (Regulation 6.42, section 4.3)

b. **SO₂**

- i. For Emission Point E-3, the owner or operator shall install, maintain, calibrate and operate a continuous emission monitoring system (CEM) for the measurement of sulfur dioxide in the flue gas. (Regulation 6.02, section 6.1.2 and Regulation 6.47, section 3.4 referencing 40 CFR 75.10(a)(1))
- ii. For Emission Point E-3, the owner or operator shall comply with acid rain requirements specified in 40 CFR Part 73 Table 2. (Regulation 6.47, section 3.2 referencing 40 CFR Part 73, Acid Rain Allowances are specified in Table 2)

c. **PM**

- i. For Emission Point E-3, the owner or operator shall conduct annual EPA Reference Method 5 performance tests for particulate matter and monitor the ESP and wet scrubber daily as specified in Additional Condition 2.d.i.[3) and 4)].
- ii. There are no monitoring requirements for emission point E-4. (See Comment 4)

d. **Opacity**

- i. For Emission Point E-3:
- 1) The owner or operator shall determine the opacity of emissions from the stack by EPA Reference Method 9 weekly, by starting daily (Monday through Friday) at the beginning of the week to attempt to get a valid EPA Reference Method 9 test completed during that week. If the plumes are combined, an opacity reading shall be taken for informational purposes and it shall specify which plumes were combined to produce that opacity value, this combined plume reading will not count as a valid reading.
 - 2) The owner or operator shall, using the initial PM performance test, correlate the data with opacity data obtained during the test to establish an alternate opacity trigger level. If excluding any opacity exemptions, any six minute average opacity value exceeds the trigger level, the owner or operator shall initiate an inspection of the process equipment, the control equipment and/or COM system and make any necessary repairs. If five percent or greater of the COM data (excluding exemptions) recorded in a calendar quarter show excursions above the trigger level, the owner or operator shall perform an EPA Reference Method 5 stack test in the following quarter. The District may waive this testing requirement upon demonstration that the cause(s) of the excursions have been corrected.
 - 3) The owner or operator shall monitor daily the following for the wet scrubber:
 - a) Recycle Pump Amps must be > 10 Amps
 - b) Recycle Pump On/Off Indication must be On
 - c) Reaction Tank pH must be >4.0 pH
 - d) CEM Stack Exit Temperature must be between $100-170^{\circ}\text{F}$
 - 4) The owner or operator shall monitor daily the following for the Electrostatic Precipitator (ESP):
 - a) Precipitator Transformer/Rectifier Availability must be $\geq 68\%$
 - b) Precipitator Secondary Kilowatts (KW) must be ≥ 2 KW
 - 5) The owner or operator shall install, maintain, calibrate and test a continuous extractive opacity emission monitoring system in one stack at LG&E Mill Creek, Cane Run, or Trimble Co before June 30, 2004.

If the continuous extractive opacity monitoring system is approved by the District and EPA, then one stack at LG&E Mill Creek shall be equipped with the extractive opacity monitoring system by October

31, 2004. Then every 3 months thereafter (January 31, 2005, April 30, 2005, and July 31, 2005), an additional stack will be equipped with the extractive opacity monitoring system. Also, if the continuous extractive opacity monitoring system is approved by the District and EPA, then Additional Conditions 2.d.i.1) and 2.d.i.2) will be superceded by Additional Condition 2.d.i.5); Or,

If the continuous extractive opacity monitoring system is not approved, one stack at LG&E Mill Creek shall be equipped with four COMs by October 31, 2004, and then every 3 months thereafter (January 31, 2005, April 30, 2005, and July 31, 2005), an additional stack will be equipped with four COMs.

- ii. For Emission Point E-4, the owner or operator shall conduct a weekly one-minute visible emissions survey, during normal operation and daylight hours, of the PM Emission Points (stacks). For Emission Points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to conduct a monthly one-minute visible emission survey, during normal operation and daylight hours. At Emission Points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9 for stack emissions within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, according to Regulation 1.07, and take all practicable steps to eliminate the exceedance.

3. **Record Keeping** (Regulation 2.16, section 4.1.9.2)

a. **NO_x**

- i. For Emission Point E-3, the owner or operator shall keep a record identifying all deviations from the requirements of the NO_x RACT Plan.
- ii. For Emission Point E-3, the owner or operator shall comply with the NO_x compliance plan requirements specified in the attached Acid Rain Permit, No.176-97-AR. These record keeping requirements shall be determined in accordance with the Title IV Phase II Acid Rain Permit and are specified in 40 CFR Part 75 Subpart F and 40 CFR Part 76 section 76.14. (Regulation 6.47, section 3.4 and 3.5 referencing 40 CFR Parts 75 and 76)
- iii. For Emission Point E-3, the owner or operator shall record on an hourly basis all NO_x emission data specified in 40 CFR Part 75 section 75.50(d).

b. **SO₂**

- i. For Emission Point E-3, the owner or operator shall maintain hourly records of SO₂ emissions as specified in Regulation 6.02, section 6.1.2.
 - ii. For Emission Point E-3, the owner or operator shall comply with the SO₂ recordkeeping requirements in the Acid Rain Permit No.176-97-AR. This permit is attached and considered part of this Title V Operating Permit. (Regulation 6.47, section 3.2 and 3.4 referencing 40 CFR Parts 73 and 75)
 - iii. For Emission Point E-3, the owner or operator shall record on an hourly basis all SO₂ emission data specified in 40 CFR 75.50(c).
- c. **PM**
- i. For Emission Point E-3, the owner or operator shall keep a record of each Method 5 test performed.
 - ii. For Emission Point E-4, there are no record keeping requirements for this emission point.(See Comment 3)
- d. **Opacity**
- i. For Emission Point E-3:
 - 1) The owner or operator shall record every six minutes the COM output.
 - 2) The owner or operator shall keep a record of every Method 9 test performed or the reason why it could not be performed that day and a record of every combined plume opacity reading.
 - 3) The owner or operator shall keep a daily record of each parameter that is required to be monitored in Additional Condition 2.d.i.3) and 2.d.i.4).
 - 4) The owner or operator shall keep a record of the output of the continuous extractive opacity monitor.
 - ii. For Emission Point E-4, records of the results of all visible emission surveys and tests performed shall be maintained and shall include the date and time of the survey; the name of the person conducting the survey; whether visible emissions were observed, and a description of any corrective action taken.
4. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall clearly identify all deviations from permit requirements in the quarterly reports. All reports shall be certified by a responsible official as defined in Regulation 2.16, section 2.36. If no deviations occur in that reporting period then the owner

or operator shall report a negative declaration for each of the following categories. The owner or operator shall report quarterly the following:

a. **NO_x**

i. For Emission point E-3:

- 1) Emission Unit ID number, Stack ID number, and/or Emission point ID number,
- 2) The beginning and ending date of the reporting period,
- 3) Identification of all periods during which a deviation occurred,
- 4) A description, including the magnitude, of the deviation,
- 5) If known, the cause of the deviation, and
- 6) Description of any corrective action taken for each deviation.

ii. For Emission Point E-3, a written report of excess emissions and the nature and cause of the excess emissions if known. The minimum data requirements for these reports are outlined in Regulation 6.02 section 16.1.

iii. For Emission Point E-3, reporting requirements for the Title IV Phase II Acid Rain Permit are specified in 40 CFR Part 75 Subpart G. Notifications, Monitoring Plans, Initial Certification and Recertification Applications, Quarterly Reports, Opacity Reports, Petitions to the Administrator, and Retired Unit Petitions shall be submitted as specified in Subpart G-Reporting Requirements.

b. **SO₂**

i. For Emission Point E-3, a written report of excess emissions and the nature and cause of the excess emissions if known. The minimum data requirements for these reports are outlined in Regulation 6.02 Section 16. (Regulation 6.02 section 16.1)

ii. For Emission Point E-3, reporting requirements for the Title IV Phase II Acid Rain Permit are specified in 40 CFR Part 75 Subpart G. Notifications, Monitoring Plans, Initial Certification and Recertification Applications, Quarterly Reports, Opacity Reports, Petitions to the Administrator, and Retired Unit Petitions shall be submitted as specified in Subpart G-Reporting Requirements.

c. **PM**

i. For Emission Point E-3, the owner or operator shall submit the results of the annual Method 5 stack test within 60 days of the completion of the test.

ii. For Emission Point E-4, there are no compliance reporting requirements for this pollutant.

d. Opacity

- i. For emission point E-3:
 - 1) Emission Unit ID number, Stack ID number, and/or Emission point ID number,
 - 2) The beginning and ending date of the reporting period,
 - 3) Any Method 9 that exceeds the standard,
 - 4) A description, including the magnitude, of the deviation,
 - 5) If known, the cause of the deviation, and
 - 6) Description of any corrective action taken for each deviation.

- ii. For emission point E-3:
 - 1) Emission Unit ID number, Stack ID number, and/or Emission point ID number,
 - 2) The beginning and ending date of the reporting period,
 - 3) Any parameter that exceeds the given ranges,
 - 4) A description, including the magnitude, of the deviation,
 - 5) If known, the cause of the deviation, and
 - 6) Description of any corrective action taken for each deviation.

- iii. For emission point E-3, reporting requirements for the Title IV Phase II Acid Rain Permit are specified in 40 CFR Part 75 Subpart G. Notifications, Monitoring Plans, Initial Certification and Recertification Applications, Quarterly Reports, Opacity Reports, Petitions to the Administrator, and Retired Unit Petitions shall be submitted as specified in Subpart G-Reporting Requirements.

- iv. For Emission Point E-4:
 - 1) Emission Unit ID number, Stack ID number, and/or Emission point ID number
 - 2) The beginning and ending date of the reporting period
 - 3) The date, time and results of each exceedance of the opacity standard
 - 4) Description of any corrective action taken for each exceedance

Comments

- 1. For emission point E-3, the owner or operator has exercised the Acid Rain Program early election option and is required to limit NO_x emissions from E-3 to 0.45 lb/MMBtu of heat input on an annual average basis, beginning on January 1, 1997 and continuing through December 31, 2007.
- 2. The NO_x RACT requirements for E-3 are met by use of Low NO_x Burners (LNB) with Overfire Air (OA). NO_x performance tests are not required under District Regulation 6.42 as CEMs are being used to demonstrate compliance.

3. For Emission Point E-4, the owner or operator has shown, by worst-case calculations without allowance for a control device, that the hourly uncontrolled PM emission standard cannot be exceeded; therefore, no additional monitoring, recordkeeping, or reporting is required to demonstrate compliance with the applicable PM standards specified in Regulation 6.09 is required for this emission point.

4. Louisville Gas & Electric Company is not subject to the requirements of 40 CFR 63, Subpart Q as no chromium-based water treatment chemicals have been introduced into any cooling tower located within the plant boundaries, prior to and after the effective date of Subpart Q, in accordance with LG&E letter, dated June 23, 1998.

Emission Unit U-3 Description: Unit 3 steam generator for electric power generation

Applicable Regulations:

Federally Enforceable Regulations		
Regulation	Title	Applicable Sections
6.02	Emission Monitoring for Existing Sources	1, 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5
6.42	Reasonably Available Control Technology Requirements for Major Volatile Organic Compound- and Nitrogen Oxides-Emitting Facilities	1, 2, 3, 4, 5
6.47	Federal Acid Rain Program for Existing Sources Incorporated by Reference	1, 2, 3, 4, 5
7.06	Standards of Performance for New Indirect Heat Exchangers	1, 2, 3, 4.1.2, 4.2, 5.1.2, 6, 7, 8
40 CFR 60 Subpart A	General Provisions	60.1 through 60.19
40 CFR 60 Subpart D	Standards of Performance for Fossil-Fuel Fired Steam Generators for Which Construction is Commenced After August 17, 1971	60.40, 60.41, 60.42(a), 60.43, 60.44, 60.45, 60.46
40 CFR Part 72	Permits Regulation	Subparts A, B, C, D, E, F, G, H, I
40 CFR Part 73	Sulfur Dioxide Allowance System	Subparts A, B, C, D, E, F, G
40 CFR Part 75	Continuous Emission Monitoring	Subparts A, B, C, D, E, F, G
40 CFR Part 76	Acid Rain Nitrogen Oxides Emission Reduction Program	76.1, 76.2, 76.3, 76.4, 76.5, 76.7, 76.8, 76.9, 76.11, 76.13, 76.14, 76.15, Appendix A, Appendix B
40 CFR Part 77	Excess Emissions	77.1, 77.2, 77.3, 77.4, 77.5, 77.6

Federally Enforceable Regulations		
Regulation	Title	Applicable Sections
40 CFR Part 78	Appeals Procedures for Acid Rain Program	78.1, 78.2, 78.3, 78.4, 78.5, 78.6, 78.8, 78.9, 78.10, 78.11, 78.13, 78.14, 78.15, 78.16, 78.17, 78.18, 78.19, 78.20

District Enforceable Regulations		
Regulation	Title	Sections
7.02	Federal New Source Performance Standards Incorporated by Reference	1.1, 1.8, 2, 3, 4, 5

Allowable Emissions:

Pollutant	Standard
PM	See Additional Condition 1.c.
Opacity	See Additional Condition 1.d.
NO _x	See Additional Condition 1.a.
SO ₂	See Additional Condition 1.b.

Components:

- E-5 Dry bottom, wall-fired boiler, nominal design rating of 4,204 MMBtu per hour, using pulverized coal as a primary fuel. Secondary fuel is natural gas. Control devices: C7 (Electrostatic precipitator) for PM and C8 (Flue Gas Desulfurization (FGD)) for SO₂
- E-6 Coal bunker with particulate control device C9 (Dry centrifugal dust collector)

Additional Conditions

1. **Standards** (Regulation 2.16, section 4.1.1)
 - a. **NO_x**
 - i. For Emission Point E-5, the owner or operator shall not allow NO_x emissions to exceed 0.50 lb/MMBtu of heat input on an annual average basis. Title IV, Phase II, Acid Rain Permit (No.176-97-AR) is attached and considered part of this Title V Operating Permit. (Regulation 6.47, section 3.5 referencing 40 CFR Part 76)
 - ii. For Emission Point E-5, the owner or operator shall not exceed the NO_x RACT emissions standard of 0.52 lb/MMBtu of heat input based on a rolling 30-day average when combusting coal. The owner or operator shall comply with the NO_x RACT Plan attached and considered part of this Title V Operating Permit. (See NO_x RACT Attachment) (Regulation 6.42, section 4.3 and Regulation 7.06, section 6 and 40 CFR 60.44(a))
 - iii. For Emission Point E-5, the owner or operator shall cause to be discharged into the atmosphere any gases which contain nitrogen oxides expressed as nitrogen dioxide in excess of 0.70 lb per million BTU heat input on a 3 hour rolling average. (Regulation 7.06, section 6.1.3)
 - b. **SO₂**
 - i. For Emission Point E-5, the owner or operator shall not exceed 1.2 lb/MMBtu per hour heat input based on a three hour rolling average. (Regulation 7.06, section 5.1.2 and 40 CFR 60.43(a)(2))
 - ii. For Emission Point E-5, the Title IV, Phase II, Acid Rain Permit No.176-97-AR is attached and considered part of this Title V Operating Permit. (Regulation 6.47, section 3.2 referencing 40 CFR Part 73, Acid Rain Allowances are specified in Table 2)
 - c. **PM**
 - i. For Emission Point E-5, the owner or operator shall not exceed an allowable particulate emission rate of 0.10 lbs/MMBtu heat input based on a three hour rolling average. (Regulation 7.06, section 4.1.2 and 40 CFR 60.42(a)(1))
 - ii. For Emission Point E-6, the owner or operator shall not exceed an allowable particulate emission rate of 82.95 lbs/hr. (Regulation 6.09, section 3.2)
 - d. **Opacity**

3.2 referencing 40 CFR Part 73, Acid Rain Allowances are specified in Table 2)

c. **PM**

- i. For Emission Point E-5, the owner or operator shall conduct annual EPA Reference Method 5 performance tests for particulate matter and monitor the ESP and wet scrubber daily as specified in Additional Condition 2.d.i.[3) and 4)].
- ii. There are no monitoring requirements for emission point E-6. (See Comment 4)

d. **Opacity**

- i. For Emission Point E-5:
 - 1) The owner or operator shall determine the opacity of emissions from the stack by EPA Reference Method 9 weekly, by starting daily (Monday through Friday) at the beginning of the week to attempt to get a valid EPA Reference Method 9 test completed during that week. If the plumes are combined, an opacity reading shall be taken for informational purposes and it shall specify which plumes were combined to produce that opacity value, this combined plume reading will not count as a valid reading.
 - 2) The owner or operator shall, using the initial PM performance test, correlate the data with opacity data obtained during the test to establish an alternate opacity trigger level. If excluding any opacity exemptions, any six minute average opacity value exceeds the trigger level, the owner or operator shall initiate an inspection of the process equipment, the control equipment and/or COM system and make any necessary repairs. If five percent or greater of the COM data (excluding exemptions) recorded in a calendar quarter show excursions above the trigger level, the owner or operator shall perform an EPA Reference Method 5 stack test in the following quarter. The District may waive this testing requirement upon demonstration that the cause(s) of the excursions have been corrected.
 - 3) The owner or operator shall monitor daily the following for the wet scrubber:
 - a) Recycle Pump Amps must be > 10 Amps
 - b) Recycle Pump On/Off Indication must be On
 - c) Reaction Tank pH must be >4.0 pH
 - d) CEM Stack Exit Temperature must be between 100-220°F

- 4) The owner or operator shall monitor daily the following for the Electrostatic Precipitator (ESP):
 - a) Precipitator Transformer/Rectifier Availability must be $\geq 68\%$
 - b) Precipitator Secondary Kilowatts (KW) must be ≥ 2 KW
- 5) The owner or operator shall install, maintain, calibrate and test a continuous extractive opacity emission monitoring system in one stack at LG&E Mill Creek, Cane Run, or Trimble Co before June 30, 2004.

If the continuous extractive opacity monitoring system is approved by the District and EPA, then one stack at LG&E Mill Creek shall be equipped with the extractive opacity monitoring system by October 31, 2004. Then every 3 months thereafter (January 31, 2005, April 30, 2005, and July 31, 2005), an additional stack will be equipped with the extractive opacity monitoring system. Also, if the continuous extractive opacity monitoring system is approved by the District and EPA, then Additional Conditions 2.d.i.1) and 2.d.i.2) will be superseded by Additional Condition 2.d.i.5); Or,

If the continuous extractive opacity monitoring system is not approved, one stack at LG&E Mill Creek shall be equipped with four COMs by October 31, 2004, and then every 3 months thereafter (January 31, 2005, April 30, 2005, and July 31, 2005), an additional stack will be equipped with four COMs.

- ii. For Emission Point E-6, the owner or operator shall conduct a weekly one-minute visible emissions survey, during normal operation and daylight hours, of the PM Emission Points (stacks). For Emission Points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to conduct a monthly one-minute visible emission survey, during normal operation and daylight hours. At Emission Points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9 for stack emissions within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, according to Regulation 1.07, and take all practicable steps to eliminate the exceedance.

e. **CO₂/O₂**

A CEMS for measuring either oxygen or carbon dioxide in the flue gases shall be installed, calibrated, maintained and operated by the owner or operator. The owner or operator shall use the conversion procedures specified in Regulation 7.06, sections 7.5 and 7.6. (Regulation 7.06, section 7.4)

3. Record Keeping (Regulation 2.16, section 4.1.9.2)**a. NO_x**

- i. For Emission Point E-5, the owner or operator shall keep a record identifying all deviations from the requirements of the NO_x RACT Plan.
- ii. For Emission Point E-5, the owner or operator shall comply with the NO_x compliance plan requirements specified in the attached Acid Rain Permit, No.176-97-AR. These record keeping requirements shall be determined in accordance with the Title IV Phase II Acid Rain Permit and are specified in 40 CFR Part 75 Subpart F and 40 CFR Part 76 section 76.14. (Regulation 6.47, section 3.4 and 3.5 referencing 40 CFR Parts 75 and 76)
- iii. For Emission Point E-5, the owner or operator shall record on an hourly basis all NO_x emission data specified in 40 CFR Part 75 section 75.50(d).

b. SO₂

- i. For Emission Point E-5, the owner or operator shall maintain hourly records of SO₂ emissions as specified in Regulation 6.02, section 6.1.2.
- ii. For Emission Point E-5, the owner or operator shall comply with the SO₂ recordkeeping requirements in the Acid Rain Permit No.176-97-AR. This permit is attached and considered part of this Title V Operating Permit. (Regulation 6.47, section 3.2 and 3.4 referencing 40 CFR Parts 73 and 75)
- iii. For Emission Point E-5, the owner or operator shall record on an hourly basis all SO₂ emission data specified in 40 CFR 75.50(c).

c. PM

- i. For Emission Point E-5, the owner or operator shall keep a record of each Method 5 test performed.
- ii. For Emission Point E-6, there are no record keeping requirements for this emission point.(See Comment 3)

d. Opacity

- i. For Emission Point E-5:
 - 1) The owner or operator shall record every six minutes the COM output.

- 2) The owner or operator shall keep a record of every Method 9 test performed or the reason why it could not be performed that day and a record of every combined plume opacity reading.
 - 3) The owner or operator shall keep a daily record of each parameter that is required to be monitored in Additional Condition 2.d.i.3) and 2.d.i.4).
 - 4) The owner or operator shall keep a record of the output of the continuous extractive opacity monitor.
- ii. For Emission Point E-6, records of the results of all visible emission surveys and tests performed shall be maintained and shall include the date and time of the survey; the name of the person conducting the survey; whether visible emissions were observed, and a description of any corrective action taken.

4. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall clearly identify all deviations from permit requirements in the quarterly reports. All reports shall be certified by a responsible official as defined in Regulation 2.16, section 2.36. If no deviations occur in that reporting period then the owner or operator shall report a negative declaration for each of the following categories. The owner or operator shall report quarterly the following:

a. **NO_x**

- i. For Emission point E-5:
 - 1) Emission Unit ID number, Stack ID number, and/or Emission point ID number,
 - 2) The beginning and ending date of the reporting period,
 - 3) Identification of all periods during which a deviation occurred,
 - 4) A description, including the magnitude, of the deviation,
 - 5) If known, the cause of the deviation, and
 - 6) Description of any corrective action taken for each deviation.
- ii. For Emission Point E-5, a written report of excess emissions and the nature and cause of the excess emissions if known. The minimum data requirements for these reports are outlined in Regulation 6.02 section 16.1.
- iii. For Emission Point E-5, reporting requirements for the Title IV Phase II Acid Rain Permit are specified in 40 CFR Part 75 Subpart G. Notifications, Monitoring Plans, Initial Certification and Recertification Applications, Quarterly Reports, Opacity Reports, Petitions to the Administrator, and Retired Unit Petitions shall be submitted as specified in Subpart G-Reporting Requirements.

- iv. For Emission Point E-5, reporting requirements for the Title IV NO_x Budget Emission Limitations as specified in 40 CFR Part 76.
- b. **SO₂**
- i. For Emission Point E-5, a written report of excess emissions and the nature and cause of the excess emissions if known. The minimum data requirements for these reports are outlined in Regulation 6.02 Section 16. (Regulation 6.02 section 16.1)
 - ii. For Emission Point E-5, reporting requirements for the Title IV Phase II Acid Rain Permit are specified in 40 CFR Part 75 Subpart G. Notifications, Monitoring Plans, Initial Certification and Recertification Applications, Quarterly Reports, Opacity Reports, Petitions to the Administrator, and Retired Unit Petitions shall be submitted as specified in Subpart G-Reporting Requirements.
- c. **PM**
- i. For Emission Point E-5, the owner or operator shall submit the results of the annual Method 5 stack test within 60 days of the completion of the test.
 - ii. For Emission Point E-6, there are no compliance reporting requirements for this pollutant.
- d. **Opacity**
- i. For emission point E-5:
 - 1) Emission Unit ID number, Stack ID number, and/or Emission point ID number,
 - 2) The beginning and ending date of the reporting period,
 - 3) Any Method 9 that exceeds the standard,
 - 4) A description, including the magnitude, of the deviation,
 - 5) If known, the cause of the deviation, and
 - 6) Description of any corrective action taken for each deviation.
 - ii. For emission point E-5:
 - 1) Emission Unit ID number, Stack ID number, and/or Emission point ID number,
 - 2) The beginning and ending date of the reporting period,
 - 3) Any parameter that exceeds the given ranges,
 - 4) A description, including the magnitude, of the deviation,
 - 5) If known, the cause of the deviation, and
 - 6) Description of any corrective action taken for each deviation.

- iii. For emission point E-5, reporting requirements for the Title IV Phase II Acid Rain Permit are specified in 40 CFR Part 75 Subpart G. Notifications, Monitoring Plans, Initial Certification and Recertification Applications, Quarterly Reports, Opacity Reports, Petitions to the Administrator, and Retired Unit Petitions shall be submitted as specified in Subpart G-Reporting Requirements.
- iv. For Emission Point E-6:
 - 1) Emission Unit ID number, Stack ID number, and/or Emission point ID number
 - 2) The beginning and ending date of the reporting period
 - 3) The date, time and results of each exceedance of the opacity standard
 - 4) Description of any corrective action taken for each exceedance

Comments

1. For emission point E-5, the owner or operator has exercised the Acid Rain Program early election option and is required to limit NO_x emissions from E-5 to 0.50 lb/MMBtu of heat input on an annual average basis, beginning on January 1, 1997 and continuing through December 31, 2007.
2. The NO_x RACT requirements for E-5 are met by use of Low NO_x Burners (LNB) with Overfire Air (OA). NO_x performance tests are not required under District Regulation 6.42 as CEMs are being used to demonstrate compliance.
3. For Emission Point E-6, the owner or operator has shown, by worst-case calculations without allowance for a control device, that the hourly uncontrolled PM emission standard cannot be exceeded; therefore, no additional monitoring, recordkeeping, or reporting is required to demonstrate compliance with the applicable PM standards specified in Regulation 7.08 is required for this emission point.
4. Louisville Gas & Electric Company is not subject to the requirements of 40 CFR 63, Subpart Q as no chromium-based water treatment chemicals have been introduced into any cooling tower located within the plant boundaries, prior to and after the effective date of Subpart Q, in accordance with LG&E letter, dated June 23, 1998.
5. Louisville Gas & Electric Company currently has a construction permit for installing SCR on Emission Points E-5 and E-7 in order to control NO_x emissions. This construction project is not subject to Regulation 2.05, Prevention of Significant Deterioration of Air Quality since it is a control device.
6. In order to comply with the NO_x reduction required by the NO_x SIP Call, the Cabinet, in consultation with EPA and public comment, has adopted the following six regulations, which became effective on August 15, 2001:

401 KAR 51:001. Definitions for 401 KAR Chapter 51

- 401 KAR 51:160. NO_x requirements for large utility and industrial boilers
- 401 KAR 51:170. NO_x requirements for cement kilns
- 401 KAR 51:180. NO_x credits for early reduction and emergency
- 401 KAR 51:190. Banking and trading of NO_x allowances
- 401 KAR 51:195. NO_x opt-in provisions

Emission Unit U-4 Description: Unit 4 steam generator for electric power generation

Applicable Regulations:

Federally Enforceable Regulations		
Regulation	Title	Applicable Sections
6.02	Emission Monitoring for Existing Sources	1, 2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18
6.09	Standards of Performance for Existing Process Operations	1, 2, 3, 5
6.42	Reasonably Available Control Technology Requirements for Major Volatile Organic Compound- and Nitrogen Oxides-Emitting Facilities	1, 2, 3, 4, 5
6.47	Federal Acid Rain Program for Existing Sources Incorporated by Reference	1, 2, 3, 4, 5
7.06	Standards of Performance for New Indirect Heat Exchangers	1, 2, 3, 4.1.2, 4.2, 5.1.2, 6, 7, 8
40 CFR 60 Subpart A	General Provisions	60.1 through 60.19
40 CFR 60 Subpart D	Standards of Performance for Fossil-Fuel Fired Steam Generators for Which Construction is Commenced After August 17, 1971	60.40, 60.41, 60.42(a), 60.43, 60.44, 60.45, 60.46
40 CFR Part 72	Permits Regulation	Subparts A, B, C, D, E, F, G, H, I
40 CFR Part 73	Sulfur Dioxide Allowance System	Subparts A, B, C, D, E, F, G
40 CFR Part 75	Continuous Emission Monitoring	Subparts A, B, C, D, E, F, G
40 CFR Part 76	Acid Rain Nitrogen Oxides Emission Reduction Program	76.1, 76.2, 76.3, 76.4, 76.5, 76.7, 76.8, 76.9, 76.11, 76.13, 76.14, 76.15, Appendix A, Appendix B
40 CFR Part 77	Excess Emissions	77.1, 77.2, 77.3, 77.4, 77.5, 77.6

Federally Enforceable Regulations		
Regulation	Title	Applicable Sections
40 CFR Part 78	Appeals Procedures for Acid Rain Program	78.1, 78.2, 78.3, 78.4, 78.5, 78.6, 78.8, 78.9, 78.10, 78.11, 78.13, 78.14, 78.15, 78.16, 78.17, 78.18, 78.19, 78.20

District Enforceable Regulations		
Regulation	Title	Sections
7.02	Federal New Source Performance Standards Incorporated by Reference	1.1, 1.8, 2, 3, 4, 5

Allowable Emissions:

Pollutant	Standard
PM	See Additional Condition 1.c.
Opacity	See Additional Condition 1.d.
NO _x	See Additional Condition 1.a.
SO ₂	See Additional Condition 1.b.

Components:

- E-7 Dry bottom, wall-fired boiler, nominal design rating of 5,025 MMBtu per hour, using pulverized coal as a primary fuel. Secondary fuel is natural gas. Control devices: C10 (Electrostatic precipitator) for PM and C11 (Flue Gas Desulfurization (FGD)) for SO₂
- E-8 Coal bunker with particulate control device C12 (Dry centrifugal dust collector)

Additional Conditions

1. **Standards** (Regulation 2.16, section 4.1.1)
 - a. **NO_x**
 - i. For Emission Point E-7, the owner or operator shall not allow NO_x emissions to exceed 0.50 lb/MMBtu of heat input on an annual average basis. Title IV, Phase II, Acid Rain Permit (No.176-97-AR) is attached and considered part of this Title V Operating Permit. (Regulation 6.47, section 3.5 referencing 40 CFR Part 76)
 - ii. For Emission Point E-7, the owner or operator shall not exceed the NO_x RACT emissions standard of 0.52 lb/MMBtu of heat input based on a rolling 30-day average when combusting coal. The owner or operator shall comply with the NO_x RACT Plan attached and considered part of this Title V Operating Permit. (See NO_x RACT Attachment) (Regulation 6.42, section 4.3 and Regulation 7.06, section 6 and 40 CFR 60.44(a))
 - iii. For Emission Point E-5, the owner or operator shall cause to be discharged into the atmosphere any gases which contain nitrogen oxides expressed as nitrogen dioxide in excess of 0.70 lb per million BTU heat input on a 3 hour rolling average. (Regulation 7.06, section 6.1.3)
 - b. **SO₂**
 - i. For Emission Point E-7, the owner or operator shall not exceed 1.2 lb/MMBtu per hour heat input based on a three hour rolling average. (Regulation 7.06, section 5.1.2 and 40 CFR 60.43(a)(2))
 - ii. For Emission Point E-7, the Title IV, Phase II, Acid Rain Permit No.176-97-AR is attached and considered part of this Title V Operating Permit. (Regulation 6.47, section 3.2 referencing 40 CFR Part 73, Acid Rain Allowances are specified in Table 2)
 - c. **PM**
 - i. For Emission Point E-7, the owner or operator shall not exceed an allowable particulate emission rate of 0.10 lbs/MMBtu heat input based on a three hour rolling average.(Regulation 7.06, section 4.1.2 and 40 CFR 60.42(a)(1))
 - ii. For Emission Point E-8, the owner or operator shall not exceed an allowable particulate emission rate of 82.95 lbs/hr. (Regulation 6.09, section 3.2)
 - d. **Opacity**

- ii. For Emission Point E-7, the owner or operator shall comply with acid rain requirements specified in 40 CFR Part 73 Table 2. (Regulation 6.47, section 3.2 referencing 40 CFR Part 73, Acid Rain Allowances are specified in Table 2)
- c. **PM**
- i. For Emission Point E-7, the owner or operator shall conduct annual EPA Reference Method 5 performance tests for particulate matter and monitor the ESP and wet scrubber daily as specified in Additional Condition 2.d.i.[3) and 4)].
 - ii. There are no monitoring requirements for emission point E-8. (See Comment 4)
- d. **Opacity**
- i. For Emission Point E-7:
 - 1) The owner or operator shall determine the opacity of emissions from the stack by EPA Reference Method 9 weekly, by starting daily (Monday through Friday) at the beginning of the week to attempt to get a valid EPA Reference Method 9 test completed during that week. If the plumes are combined, an opacity reading shall be taken for informational purposes and it shall specify which plumes were combined to produce that opacity value, this combined plume reading will not count as a valid reading.
 - 2) The owner or operator shall, using the initial PM performance test, correlate the data with opacity data obtained during the test to establish an alternate opacity trigger level. If excluding any opacity exemptions, any six minute average opacity value exceeds the trigger level, the owner or operator shall initiate an inspection of the process equipment, the control equipment and/or COM system and make any necessary repairs. If five percent or greater of the COM data (excluding exemptions) recorded in a calendar quarter show excursions above the trigger level, the owner or operator shall perform an EPA Reference Method 5 stack test in the following quarter. The District may waive this testing requirement upon demonstration that the cause(s) of the excursions have been corrected.
 - 3) The owner or operator shall monitor daily the following for the wet scrubber:
 - a) Recycle Pump Amps must be > 10 Amps
 - b) Recycle Pump On/Off Indication must be On

- c) Reaction Tank pH must be >4.0 pH
 - d) CEM Stack Exit Temperature must be between 100-170°F
- 4) The owner or operator shall monitor daily the following for the Electrostatic Precipitator (ESP):
- a) Precipitator Transformer/Rectifier Availability must be $\geq 68\%$
 - b) Precipitator Secondary Kilowatts (KW) must be ≥ 2 KW
- 5) The owner or operator shall install, maintain, calibrate and test a continuous extractive opacity emission monitoring system in one stack at LG&E Mill Creek, Cane Run, or Trimble Co before June 30, 2004.

If the continuous extractive opacity monitoring system is approved by the District and EPA, then one stack at LG&E Mill Creek shall be equipped with the extractive opacity monitoring system by October 31, 2004. Then every 3 months thereafter (January 31, 2005, April 30, 2005, and July 31, 2005), an additional stack will be equipped with the extractive opacity monitoring system. Also, if the continuous extractive opacity monitoring system is approved by the District and EPA, then Additional Conditions 2.d.i.1) and 2.d.i.2) will be superseded by Additional Condition 2.d.i.5); Or,

If the continuous extractive opacity monitoring system is not approved, one stack at LG&E Mill Creek shall be equipped with four COMs by October 31, 2004, and then every 3 months thereafter (January 31, 2005, April 30, 2005, and July 31, 2005), an additional stack will be equipped with four COMs.

- ii. For Emission Point E-8, the owner or operator shall conduct a weekly one-minute visible emissions survey, during normal operation and daylight hours, of the PM Emission Points (stacks). For Emission Points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to conduct a monthly one-minute visible emission survey, during normal operation and daylight hours. At Emission Points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9 for stack emissions within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, according to Regulation 1.07, and take all practicable steps to eliminate the exceedance.

e. CO_2/O_2

A CEMS for measuring either oxygen or carbon dioxide in the flue gases shall be installed, calibrated, maintained and operated by the owner or operator. The owner or operator shall use the conversion procedures specified in Regulation 7.06, sections 7.5 and 7.6. (Regulation 7.06, section 7.4)

3. **Record Keeping** (Regulation 2.16, section 4.1.9.2)

a. **NO_x**

- i. For Emission Point E-7, the owner or operator shall keep a record identifying all deviations from the requirements of the NO_x RACT Plan.
- ii. For Emission Point E-7, the owner or operator shall comply with the NO_x compliance plan requirements specified in the attached Acid Rain Permit, No.176-97-AR. These record keeping requirements shall be determined in accordance with the Title IV Phase II Acid Rain Permit and are specified in 40 CFR Part 75 Subpart F and 40 CFR Part 76 section 76.14. (Regulation 6.47, section 3.4 and 3.5 referencing 40 CFR Parts 75 and 76)
- iii. For Emission Point E-7, the owner or operator shall record on an hourly basis all NO_x emission data specified in 40 CFR Part 75 section 75.50(d).

b. **SO₂**

- i. For Emission Point E-7, the owner or operator shall maintain hourly records of SO₂ emissions as specified in Regulation 6.02, section 6.1.2.
- ii. For Emission Point E-7, the owner or operator shall comply with the SO₂ recordkeeping requirements in the Acid Rain Permit No.176-97-AR. This permit is attached and considered part of this Title V Operating Permit. (Regulation 6.47, section 3.2 and 3.4 referencing 40 CFR Parts 73 and 75)
- iii. For Emission Point E-7, the owner or operator shall record on an hourly basis all SO₂ emission data specified in 40 CFR 75.50(c).

c. **PM**

- i. For Emission Point E-7, the owner or operator shall keep a record of each Method 5 test performed.
- ii. For Emission Point E-8, there are no record keeping requirements for this emission point.(See Comment 3)

d. **Opacity**

- i. For Emission Point E-7:

- 1) The owner or operator shall record every six minutes the COM output.
 - 2) The owner or operator shall keep a record of every Method 9 test performed or the reason why it could not be performed that day and a record of every combined plume opacity reading.
 - 3) The owner or operator shall keep a daily record of each parameter that is required to be monitored in Additional Condition 2.d.i.3) and 2.d.i.4).
 - 4) The owner or operator shall keep a record of the output of the continuous extractive opacity monitor.
- ii. For Emission Point E-8, records of the results of all visible emission surveys and tests performed shall be maintained and shall include the date and time of the survey; the name of the person conducting the survey; whether visible emissions were observed, and a description of any corrective action taken.

4. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall clearly identify all deviations from permit requirements in the quarterly reports. All reports shall be certified by a responsible official as defined in Regulation 2.16, section 2.36. If no deviations occur in that reporting period then the owner or operator shall report a negative declaration for each of the following categories. The owner or operator shall report quarterly the following:

- a. **NO_x**
- i. For Emission point E-7:
 - 1) Emission Unit ID number, Stack ID number, and/or Emission point ID number,
 - 2) The beginning and ending date of the reporting period,
 - 3) Identification of all periods during which a deviation occurred,
 - 4) A description, including the magnitude, of the deviation,
 - 5) If known, the cause of the deviation, and
 - 6) Description of any corrective action taken for each deviation.
 - ii. For Emission Point E-7, a written report of excess emissions and the nature and cause of the excess emissions if known. The minimum data requirements for these reports are outlined in Regulation 6.02 section 16.1.
 - iii. For Emission Point E-7, reporting requirements for the Title IV Phase II Acid Rain Permit are specified in 40 CFR Part 75 Subpart G. Notifications, Monitoring Plans, Initial Certification and Recertification Applications, Quarterly Reports, Opacity Reports, Petitions to the Administrator, and

Retired Unit Petitions shall be submitted as specified in Subpart G-Reporting Requirements.

- iv. For Emission Point E-7, reporting requirements for the Title IV NO_x Budget Emission Limitations as specified in 40 CFR Part 76.

b. **SO₂**

- i. For Emission Point E-7, a written report of excess emissions and the nature and cause of the excess emissions if known. The minimum data requirements for these reports are outlined in Regulation 6.02 Section 16. (Regulation 6.02 section 16.1)
- ii. For Emission Point E-7, reporting requirements for the Title IV Phase II Acid Rain Permit are specified in 40 CFR Part 75 Subpart G. Notifications, Monitoring Plans, Initial Certification and Recertification Applications, Quarterly Reports, Opacity Reports, Petitions to the Administrator, and Retired Unit Petitions shall be submitted as specified in Subpart G-Reporting Requirements.

c. **PM**

- i. For Emission Point E-7, the owner or operator shall submit the results of the annual Method 5 stack test within 60 days of the completion of the test.
- ii. For Emission Point E-8, there are no compliance reporting requirements for this pollutant.

d. **Opacity**

- i. For emission point E-7:
 - 1) Emission Unit ID number, Stack ID number, and/or Emission point ID number,
 - 2) The beginning and ending date of the reporting period,
 - 3) Any Method 9 that exceeds the standard,
 - 4) A description, including the magnitude, of the deviation,
 - 5) If known, the cause of the deviation, and
 - 6) Description of any corrective action taken for each deviation.
- ii. For emission point E-7:
 - 1) Emission Unit ID number, Stack ID number, and/or Emission point ID number,
 - 2) The beginning and ending date of the reporting period,
 - 3) Any parameter that exceeds the given ranges,
 - 4) A description, including the magnitude, of the deviation,

- 5) If known, the cause of the deviation, and
 - 6) Description of any corrective action taken for each deviation.
- iii. For emission point E-7, reporting requirements for the Title IV Phase II Acid Rain Permit are specified in 40 CFR Part 75 Subpart G. Notifications, Monitoring Plans, Initial Certification and Recertification Applications, Quarterly Reports, Opacity Reports, Petitions to the Administrator, and Retired Unit Petitions shall be submitted as specified in Subpart G-Reporting Requirements.
- iv. For Emission Point E-8:
- 1) Emission Unit ID number, Stack ID number, and/or Emission point ID number
 - 2) The beginning and ending date of the reporting period
 - 3) The date, time and results of each exceedance of the opacity standard
 - 4) Description of any corrective action taken for each exceedance

Comments

1. For emission point E-7, the owner or operator has exercised the Acid Rain Program early election option and is required to limit NO_x emissions from E-7 to 0.50 lb/MMBtu of heat input on an annual average basis, beginning on January 1, 1997 and continuing through December 31, 2007.
2. The NO_x RACT requirements for E-7 are met by use of Low NO_x Burners (LNB) with Overfire Air (OA). NO_x performance tests are not required under District Regulation 6.42 as CEMs are being used to demonstrate compliance.
3. For Emission Point E-8, the owner or operator has shown, by worst-case calculations without allowance for a control device, that the hourly uncontrolled PM emission standard cannot be exceeded; therefore, no additional monitoring, recordkeeping, or reporting is required to demonstrate compliance with the applicable PM standards specified in Regulation 7.08 is required for this emission point.
4. Louisville Gas & Electric Company is not subject to the requirements of 40 CFR 63, Subpart Q as no chromium-based water treatment chemicals have been introduced into any cooling tower located within the plant boundaries, prior to and after the effective date of Subpart Q, in accordance with LG&E letter, dated June 23, 1998.
5. Louisville Gas & Electric Company currently has a construction permit for installing SCR on Emission Points E-5 and E-7 in order to control NO_x emissions. This construction project is not subject to Regulation 2.05, Prevention of Significant Deterioration of Air Quality since it is a control device.

6. In order to comply with the NO_x reduction required by the NO_x SIP Call, the Cabinet, in consultation with EPA and public comment, has adopted the following six regulations, which became effective on August 15, 2001:

401 KAR 51:001. Definitions for 401 KAR Chapter 51

401 KAR 51:160. NO_x requirements for large utility and industrial boilers

401 KAR 51:170. NO_x requirements for cement kilns

401 KAR 51:180. NO_x credits for early reduction and emergency

401 KAR 51:190. Banking and trading of NO_x allowances

401 KAR 51:195. NO_x opt-in provisions

Emission Unit U-5 and U-6 Description: Auxiliary reheat boiler for Units 3 and 4

Applicable Regulations:

Federally Enforceable Regulations		
Regulation	Title	Applicable Sections
7.06	Standards of Performance for New Indirect Heat Exchangers	1, 2, 3, 4.1.2, 4.2, 5.1.2, 6, 7, 8
40 CFR 60 Subpart A	General Provisions	60.1 through 60.19
40 CFR 60 Subpart Dc	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	60.40c, 60.41c, 60.48c(a) and (i)

District Enforceable Regulations		
Regulation	Title	Sections
7.02	Federal New Source Performance Standards Incorporated by Reference	1.1, 1.11, 2, 3, 4, 5

Allowable Emissions:

Pollutant	Standard
NO _x	See Additional Condition 1.c.
PM	See Additional Condition 1.a.
SO ₂	See Additional Condition 1.b.
Opacity	See Additional Condition 1.d.

Components:

E-10 Hot water boiler, nominal design rating of 88 MMBtu per hour, using natural gas. (U-6)

Additional Conditions1. **Standards** (Regulation 2.16, section 4.1.1)a. **PM**

For Emission Point E-10, the owner or operator shall limit the PM emissions to 0.10 lb/MMBtu heat input based on a three hour rolling average. (Regulation 7.06, section 4.1.2)

b. **SO₂**

For Emission Point E-10, the owner or operator shall limit SO₂ emissions to 0.8 lb/MMBtu heat input based on a three hour rolling average. (Regulation 7.06, section 5.1.2)

c. **NO_x**

The owner or operator shall not allow combustion of natural gas in E-10 to exceed a volume of 46.8 MM cubic feet in any calendar month in order to avoid PSD requirements.

d. **Opacity**

No owner or operator shall cause the emission into the open air of particulate matter from any indirect heat exchanger which is greater than 20% opacity, except for emissions from an indirect heat exchanger during building a new fire for the period required to bring the boiler up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations. (Regulation 7.06, section 4.2)

2. **Monitoring** (Regulation 2.16, section 4.1.9.1)a. **PM**

The owner or operator has shown that the PM emission standard cannot be exceeded; therefore, no additional monitoring is required to demonstrate compliance.

b. **SO₂**

The owner or operator has shown that the SO₂ emission standard cannot be exceeded; therefore, no additional monitoring is required to demonstrate compliance.

c. **NO_x**

See Additional Condition 3.c.

d. **Opacity**

The owner or operator shall conduct a monthly one-minute visible emissions survey, during normal operation and daylight hours, of the PM Emission Points (stacks). No more than four Emission Points shall be observed simultaneously. At Emission Points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9 for stack emissions within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, according to Regulation 1.07, and take all practicable steps to eliminate the exceedance.

3. **Record keeping** (Regulation 2.16, section 4.1.9.2)

a. **PM**

The owner or operator has shown that the PM emission standard cannot be exceeded; therefore, no additional recordkeeping is required to demonstrate compliance.

b. **SO₂**

The owner or operator has shown that the SO₂ emission standard cannot be exceeded; therefore, no additional recordkeeping is required to demonstrate compliance.

c. **NO_x**

The owner or operator shall maintain monthly records of the amount of fuel combusted in both of these boilers combined in order to demonstrate compliance with Additional Condition 1.c.

d. **Opacity**

The owner or operator shall keep records of all surveys and Method 9 results.

4. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall clearly identify all deviations from permit requirements in the semi-annual reports. All reports shall be certified by a responsible official as defined in Regulation 2.16, section 2.36. If no deviations occur in that reporting period then the owner or operator shall report a negative declaration for each of the following categories. The owner or operator shall report semi-annually the following:

a. **PM**

There are no compliance reporting requirements for this pollutant.

b. SO₂

There are no compliance reporting requirements for this pollutant.

c. NO_x

- i. Emission Unit ID number, Stack ID number, and/or Emission point ID number
- ii. The beginning and ending date of the reporting period
- iii. Identification of all periods of exceedance of the combined usage limit in additional condition 1.c.
- v. Description of any corrective action taken for each exceedance

d. Opacity

- i. Emission Unit ID number, Stack ID number, and/or Emission point ID number
- ii. The beginning and ending date of the reporting period
- iii. The date, time and results of each Method 9 that exceeded the opacity standard
- v. Description of any corrective action taken for each exceedance

Comment

1. Louisville Gas and Electric has received an exemption from the District and from EPA to keep fuel consumption records on a monthly basis rather than on a daily basis, as in 40 CFR 60.48c(g). All requirements cease when and if the units are removed from service provided that official notification has been made to the District.
2. The District has approved a Board Order dated March 21, 2001 revised February 20, 2002 (attached), which includes possibly removing these two reheat boilers. The boiler for Units 1 and 2 has been disconnected and will no longer be used.

Emission Unit U-8 Description: Gypsum Processing Plant (GPP)

Applicable Regulations:

Federally Enforceable Regulations		
Regulation	Title	Applicable Sections
7.08	Standards of Performance for New Process Operations	1, 2, 3

District Enforceable Regulations		
Regulation	Title	Applicable Sections
5.11	Standards of Performance for Existing Sources Emitting Toxic Air Pollutants	1, 2, 3, 4, 5, 6

Allowable Emissions:

Pollutant	Standard
PM	See Additional Condition 1.a.
Opacity	See Additional Condition 1.b.
TAP	See Additional Condition 1.c.

Components:

E-13 2 Flyash silos, controlled by baghouse (C15) and baghouse (C16)

Additional Conditions1. **Standards** (Regulation 2.16, section 4.1.1)a. **PM**

The owner or operator shall limit PM emissions from emission point E-13 to 34.9 lb/hr. (Regulation 7.08, section 3.3)

b. **Opacity**

The owner or operator shall not cause to be discharged into the atmosphere any gases that contain PM that is equal to or greater than 20% opacity. (Regulation 7.08, section 3.2)

c. **TAP**

The owner or operator shall not allow TAP emissions to exceed the ASL, unless RACT or modeling is performed. (Regulation 5.11)

2. **Monitoring** (Regulation 2.16, section 4.1.9.1)a. **PM**

The owner or operator has shown, by worst-case calculations, that the hourly uncontrolled PM emission standard cannot be exceeded; therefore, no additional monitoring to demonstrate compliance with the applicable PM standards specified in Regulation 7.08 is required for this emission unit.

b. **Opacity**

The owner or operator shall conduct a weekly one-minute visible emissions survey, during normal operation and daylight hours, of the PM Emission Points (stacks). No more than four Emission Points shall be observed simultaneously. For Emission Points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to conduct a monthly one-minute visible emission survey, during normal operation and daylight hours. No more than four Emission Points shall be observed simultaneously. At Emission Points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9 for stack emissions within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, according to Regulation 1.07, and take all practicable steps to eliminate the exceedance.

c. **TAP**

See Additional Condition 3.c.

3. **Record keeping** (Regulation 2.16, section 4.1.9.2)

a. **PM**

The owner or operator has shown, by worst-case calculations, that the hourly uncontrolled PM emission standard cannot be exceeded; therefore, no additional recordkeeping to demonstrate compliance with the applicable PM standards specified in Regulation 7.08 is required for this emission unit.

b. **Opacity**

The owner or operator shall maintain records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date and time of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed.

c. **TAP**

The owner or operator shall calculate and record monthly TAP emissions using a 30-day material balance, and ascertain that the adjusted significant level (ASL) has not been exceeded; and make these records available to the District upon request.

4. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall clearly identify all deviations from permit requirements in the semi-annual reports. All reports shall be certified by a responsible official as defined in Regulation 2.16, section 2.36. If no deviations occur in that reporting period then the owner or operator shall report a negative declaration for each of the following categories. The owner or operator shall report semi-annually the following:

a. **PM**

There are no compliance reporting requirements for this pollutant.

b. **Opacity**

- i. Emission Unit ID number and Emission point ID number
- ii. The beginning and ending date of the reporting period
- iii. The date, time and results of each Method 9 that exceeded the opacity standards
- iv. The number of surveys that visible emissions were observed
- v. Description of any corrective action taken

c. **TAP**

- i. Emission Unit ID number and Emission point ID number
- ii. The beginning and ending date of the reporting period
- iii. Identification of all periods of exceedances of the ASL
- iv. Description of any corrective action taken for each exceedance

Comment

The following equipment has been removed:

- E-12 2 Lime silos, controlled by baghouse (C14)
- E-14 Pug Mill Mixer A, controlled by wet dust collector (C17)
- E-15 Pug Mill Mixer B, controlled by wet dust collector (C18)

Emission Unit U-9 Description: Flyash transfer bins system

Applicable Regulations:

Federally Enforceable Regulations		
Regulation	Title	Applicable Sections
7.08	Standards of Performance for New Process Operations	1, 2, 3

District Enforceable Regulations		
Regulation	Title	Applicable Sections
5.11	Standards of Performance for Existing Sources Emitting Toxic Air Pollutants	1, 2, 3, 4, 5, 6

Allowable Emissions:

Pollutant	Standard
PM	See Additional Condition 1.a.
Opacity	See Additional Condition 1.b.
TAP	See Additional Condition 1.c.

Components:

- E-16 Transfer bin for units 1 and 2, controlled by baghouse (C19)
- E-17 Transfer bin for unit 3, controlled by baghouse (C20)
- E-18 Transfer bin for unit 4, controlled by baghouse (C21)

Additional Conditions1. **Standards** (Regulation 2.16, section 4.1.1)a. **PM**

The owner or operator shall limit PM emissions from emission point E-16 through E-18 to 34.9 lb/hr combined for all three emission points. (Regulation 7.08, section 3.3)

b. **Opacity**

The owner or operator shall not cause to be discharged into the atmosphere any gases that contain PM that is equal to or greater than 20% opacity. (Regulation 7.08, section 3.2)

c. **TAP**

The owner or operator shall not allow TAP emissions to exceed the ASL, unless BACT or modeling is performed. (Regulation 5.11)

2. **Monitoring** (Regulation 2.16, section 4.1.9.1)a. **PM**

The owner or operator has shown, by worst-case calculations, that the hourly uncontrolled PM emission standard cannot be exceeded; therefore, no additional monitoring to demonstrate compliance with the applicable PM standards specified in Regulation 7.08 is required for this emission unit.

b. **Opacity**

The owner or operator shall conduct a weekly one-minute visible emissions survey, during normal operation and daylight hours, of the PM Emission Points (stacks). No more than four Emission Points shall be observed simultaneously. For Emission Points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to conduct a monthly one-minute visible emission survey, during normal operation and daylight hours. No more than four Emission Points shall be observed simultaneously. At Emission Points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a Method 9 within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, according to Regulation 1.07, and take all practicable steps to eliminate the exceedance.

c. **TAP**

See Additional Condition 3.c.

3. **Record keeping** (Regulation 2.16, section 4.1.9.2)

a. **PM**

The owner or operator has shown, by worst-case calculations, that the hourly uncontrolled PM emission standard cannot be exceeded; therefore, no additional recordkeeping to demonstrate compliance with the applicable PM standards specified in Regulation 7.08 is required for this emission unit.

b. **Opacity**

The owner or operator shall maintain records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date and time of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed.

c. **TAP**

The owner or operator shall calculate and record monthly TAP emissions using a 30-day material balance, and ascertain that the adjusted significant level (ASL) has not been exceeded; and make these records available to the District upon request.

4. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall clearly identify all deviations from permit requirements in the semi-annual reports. All reports shall be certified by a responsible official as defined in Regulation 2.16, section 2.36. If no deviations occur in that reporting period then the owner or operator shall report a negative declaration for each of the following categories. The owner or operator shall report semi-annually the following:

a. **PM**

There are no compliance reporting requirements for this pollutant.

b. **Opacity**

- i. Emission Unit ID number and Emission point ID number
- ii. The beginning and ending date of the reporting period
- iii. The date, time and results of each Method 9 that exceeded the opacity standards
- iv. The number of surveys that visible emissions were observed
- v. Description of any corrective action taken

c. **TAP**

- i. Emission Unit ID number and Emission point ID number
- ii. The beginning and ending date of the reporting period
- iii. Identification of all periods of exceedances of the ASL
- iv. Description of any corrective action taken for each exceedance

Emission Unit U-10 Description: Stage I gasoline fueling station

Applicable Regulations:

Federally Enforceable Regulations		
Regulation	Title	Sections
6.40	Standards of Performance for Gasoline Transfer to Motor Vehicles (Stage II Vapor Recovery)	1.3
7.15	Standards of Performance for Gasoline Transfer to New Service Station Storage Tanks (Stage I Vapor Recovery)	1, 2, 3.1, 3.3, 3.4, 3.6, 3.7, 3.8 and 5

District Enforceable Regulations		
Regulation	Title	Sections
5.14	Hazardous Air Pollutants and Source Categories	1, 2, 3

Allowable Emissions:

Pollutant	Standards
VOC	See Additional Condition 1.

Components:

E-20 Stage I gasoline refueling station including of one 3000 gallon unleaded gasoline storage tank

Additional Conditions1. **Standards** (Regulation 2.16, section 4.1.1)**VOC** (Regulation 7.15, section 3 and Regulation 6.40, section 1.3)

- a. The owner or operator shall install, maintain and operate the storage tank with a submerged fill pipe, vent line restrictions, a vapor balance system, and vapor tight connections on the liquid fill and vapor return hoses.
- b. The owner or operator shall not allow delivery of fuel to the storage tanks until the vapor balance system is properly connected.
- c. The owner or operator shall not allow delivery of gasoline to a service station without connecting the vapor return hose between the tank of the truck and the storage tank receiving the product.
- d. The owner or operator shall maintain all above ground tanks with dry breaks
- e. The owner or operator shall operate and maintain equipment with no defects and all fill tubes shall be equipped with vapor-tight covers including gaskets; all hoses, fittings and couplings shall be in vapor-tight condition; and all dry breaks shall have vapor tight seals and shall be equipped with vapor tight covers or dust covers.
- f. The owner or operator shall not exceed 10000 gallons of throughput per month, in order to be exempted from Regulation 6.40, except for the recordkeeping and reporting requirements. (Regulation 6.40, section 1.3)

2. **Monitoring** (Regulation 2.16, section 4.1.9.1)**VOC**

See Additional Condition 3.

3. **Record keeping** (Regulation 2.16, section 4.1.9.2)**VOC** (Regulation 6.40, section 3.1.1)

The owner or operator shall keep a record of the amount of throughput of gasoline per month to determine compliance with Additional Condition 1.f.

4. **Reporting** (Regulation 2.16, section 4.1.9.3)**VOC** (Regulation 6.40, section 1.3)

The owner or operator shall submit a report within 30 days of December 16 every year showing that they are still exempt from Regulation 6.40.

Emission Unit U-11 Description: Non-halogenated cold solvent parts cleaners

Applicable Regulations:

Federally Enforceable Regulations		
Regulation	Title	Applicable Sections
6.18	Standards of Performance for Solvent Metal Cleaning Equipment	1, 2, 3, 4

Allowable Emissions:

Pollutant	Standard
VOC	See Additional Condition 1.

Additional Conditions1. **Standards** (Regulation 2.16, section 4.1.1)**VOC** (Regulation 6.18, section 4.1, 4.2, 4.3.2)

- a. The cleaner shall be equipped with a cover.
- b. The cleaner shall be equipped with a drainage facility such that VOC that drains off parts removed from the cleaner will return to the cleaner.
- c. A permanent, conspicuous label summarizing the operating requirements specified in section 4.2 shall be installed on or near the cleaner.
- d. If used, the VOC spray shall be a fluid stream (not a fine, atomized, or shower type spray) at a pressure that does not cause excessive splashing.
- e. Do not dispose of waste VOC or transfer it to another party in a manner that more than 20% by weight of the waste VOC can evaporate into the atmosphere. Store waste VOC only in covered containers.
- f. Close degreaser cover whenever not handling a part in the cleaner.
- g. Drain cleaned parts until dripping ceases (15 seconds is usually necessary).
- h. The owner or operator shall not operate a cold cleaning degreaser with a solvent vapor pressure that exceeds 1.0 mm Hg (0.019 psi) measured at 20°C (68°F).

2. **Monitoring** (Regulation 2.16, section 4.1.9.1)**VOC**

The owner or operator shall conduct monthly inspections to verify ongoing compliance with the control and operational requirements specified in Additional Condition 1.

3. **Record Keeping** (Regulation 2.16, section 4.1.9.2)**VOC** (Regulation 6.18, section 4.4)

- a. The owner or operator shall maintain records that include the following for each purchase:
 - i. The name and address of the solvent supplier,
 - ii. The date of the purchase,
 - iii. The type of the solvent, and

- iv. The vapor pressure of the solvent measured in mm Hg at 20°C (68°F).
 - b. All records required by section 4.4 shall be retained for 5 years and made available to the District upon request.
 - c. The owner or operator shall maintain records of the results of the inspections specified in Additional Condition 2.
- 4. **Reporting** (Regulation 2.16, section 4.1.9.3)

VOC

There are no compliance reporting requirements for this pollutant

Emission Unit U-12 Description: Limestone Processing Operation

Applicable Regulations:

Federally Enforceable Regulations		
Regulation	Title	Applicable Sections
7.08	Standards of Performance for New Process Operations	1, 2, 3
40 CFR 60 Subpart A	General Provisions	60.1 through 60.19
40 CFR 60 Subpart OOO	Standards of Performance for Nonmetallic Mineral Processing Plants	60.670, 60.671, 60.672(b)(e), 60.673, 60.675(d), 60.676(f)(j)

District Enforceable Regulations		
Regulation	Title	Applicable Sections
7.02	Federal New Source Performance Standards Incorporated by Reference	1.1, 1.72, 2, 3, 4, 5

Allowable Emissions:

Pollutant	Standard
PM	See Additional Condition 1.a.
Opacity	See Additional Condition 1.b.

Components:

- E-24 Barge Unloading including the unloading hopper at the barge (Regulation 7.08)
- E-25 Transfer point from conveyor to storage pile (Regulation 7.08 and 40 CFR 60 Subpart OOO)
- E-26 Transfer point from the hopper to the LA belt conveyor (Regulation 7.08 and 40 CFR 60 Subpart OOO)
- E-27 Transfer point from the LA belt conveyor to the LB belt conveyor (Regulation 7.08 and 40 CFR 60 Subpart OOO)
- E-28 Limestone grinding building containing the crushers and ball mills and including the reclaim conveyors (Regulation 7.08 and 40 CFR 60 Subpart OOO)

Additional Conditions1. **Standards** (Regulation 2.16, section 4.1.1)a. **PM**

- i. The owner or operator shall limit PM emissions from emission point E-24 to 49.92 lb/hr. (Regulation 7.08, section 3.1.1)
- ii. The owner or operator shall limit PM emissions from emission point E-25, E-26, E-27, and E-28 to 52.28 lb/hr. (Regulation 7.08, section 3.1.1)

b. **Opacity**

- i. For emission point E-24, the owner or operator shall not cause to be discharged into the atmosphere any gases that contain PM that is equal to or greater than 20% opacity. (Regulation 7.08, section 3.2)
- ii. For emission point E-25, E-26, and E-27 no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any fugitive emissions which exhibit greater than 10 percent opacity. (40 CFR 60.672(b))(See Comment)
- iii. For emission point E-28, no owner or operator shall cause to be discharged into the atmosphere from any building enclosing any transfer point on a conveyor belt or any other affected facility any visible fugitive emissions. (40 CFR 60.672(e)(1))(See Comment)

2. **Monitoring** (Regulation 2.16, section 4.1.9.1)a. **PM**

See Additional Condition 3.a.

b. **Opacity**

The owner or operator shall conduct a weekly one-minute visible emissions survey, during normal operation and daylight hours, of the PM Emission Points (E-24, E-25, E-26, E-27, and E-28). No more than four Emission Points shall be observed simultaneously. For Emission Points without observed visible emissions during twelve consecutive operating weeks, the owner or operator may elect to conduct a monthly one-minute visible emission survey, during normal operation and daylight hours. No more than four Emission Points shall be observed simultaneously. At Emission Points where visible emissions are observed, the owner or operator shall initiate corrective action within eight hours of the initial observation. If the visible emissions persist, the owner or operator shall perform or cause to be performed a

Method 9 within 24 hours of the initial observation. If the opacity standard is exceeded, the owner or operator shall report the exceedance to the District, according to Regulation 1.07, and take all practicable steps to eliminate the exceedance.

3. **Record keeping** (Regulation 2.16, section 4.1.9.2)

a. **PM**

The owner or operator shall keep a monthly records of the throughput of limestone for each emission point to determine that the PM emission limit is not exceeded.

b. **Opacity**

The owner or operator shall maintain records of the results of all visible emissions surveys and tests. Records of the results of any visible emissions survey shall include the date and time of the survey, the name of the person conducting the survey, whether or not visible emissions were observed, and what if any corrective action was performed.

4. **Reporting** (Regulation 2.16, section 4.1.9.3)

The owner or operator shall clearly identify all deviations from permit requirements in the semi-annual reports. All reports shall be certified by a responsible official as defined in Regulation 2.16, section 2.36. If no deviations occur in that reporting period then the owner or operator shall report a negative declaration for each of the following categories. The owner or operator shall report semi-annually the following:

a. **PM**

- i. Emission Unit ID number and Emission point ID number
- ii. The beginning and ending date of the reporting period
- iii. The quantity of excess PM emissions for each exceedance
- iv. Description of any corrective action taken for each exceedance

b. **Opacity**

- i. Emission Unit ID number and Emission point ID number
- ii. The beginning and ending date of the reporting period
- iii. The date, time and results of each Method 9 that exceeded the opacity standards
- iv. The number of surveys that visible emissions were observed
- v. Description of any corrective action taken

Comment

By demonstrating compliance with the opacity requirements in these conditions it also demonstrates compliance with the 20% opacity requirement in Regulation 7.08.

Permit Shield

The owner or operator is hereby granted a permit shield that shall apply as long as the owner or operator demonstrates ongoing compliance with all conditions of this permit. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements of the regulations cited in this permit as of the date of issuance, pursuant to Regulation 2.16, section 4.6.1.

Off-Permit Documents

There are no off-permit documents associated with this Title V permit.

Alternative Operating Scenario

The company requested no alternative operating scenario in its Title V application.

Insignificant Activities		
Description	Quantity	Basis
Fuel or Lubricating oils storage tanks with vapor pressure <10mm Hg @ 20 deg C	Various	Regulation 2.02, section 2.3.9.2
Storage tanks-diesel or fuel oil-not for sale, resale or distribution-annual turnover <2X capacity	Various	Regulation 2.02, section 2.3.25
Minor combustion sources <10 MMBtu/hr	Various	Regulation 2.02, section 2.1.1
Internal combustion engines	Various	Regulation 2.02, section 2.2
Brazing, soldering, or welding equipment	Various	Regulation 2.02, section 2.3.4
Emergency relief vents for boiler steam supply	Various	Regulation 2.02, section 2.3.10
Lab exhaust systems	Various	Regulation 2.02, section 2.3.11
Soil or groundwater remediation projects-passive or total removal	Various	Regulation 2.02, section 2.3.20
Portable fuel storage tanks (capacity less than 500 gallons)	Various	Regulation 2.02, section 2.3.23
No.2 fuel oil, secondary fuel (670,000 gallons each) (E-21 and E-22) (installation date 1978)	2	40 CFR60.111a(b) and Regulation 2.02, section 2.3.9.2
Ventilation system (bakeries & restaurants)	1	Regulation 2.02, section 2.3.12

Insignificant Activities		
Description	Quantity	Basis
Paved and Unpaved Roads	Various	No applicable regulation
Ashpond with wet storage	1	No applicable regulation
Infrequent evaporation of boiler cleaning solutions	Various	No applicable regulation
Infrequent burning of deminimus quantities of used oil for energy recovery	Various	No applicable regulation
Cooling Towers	Various	No applicable regulation
Enclosed sandblasting equipment	Various	No applicable regulation
Landfill	1	No applicable regulation

- A. Insignificant Activities are only those activities or processes falling into the general categories defined in Regulation 2.02, Section 2, and not associated with a specific operation or process for which there is a specific regulation. Equipment associated with a specific operation or process (Emission Unit) shall be listed with the specific process even though there may be no applicable requirements. Information contained in the permit and permit summary shall clearly indicate that those items identified with negligible emissions have no applicable requirements.
- B. Activities identified In Regulation 2.02, Section 2, may not require a permit and may be insignificant with regard to application disclosure requirements but may still have generally applicable requirements that continue to apply to the source and must be included in the Title V permit.
- i. No facility, having been designated as an insignificant activity, shall be exempt from any generally applicable requirements which shall include a 20% opacity limit for facilities not otherwise regulated.
 - ii. No periodic monitoring shall be required for facilities designated as insignificant activities.
- C. The Insignificant Activities table is correct as of the date of the permit was proposed for review by the USEPA, Region 4. The company shall submit an updated list of insignificant activities annually with the Title V compliance certification pursuant to District Regulation 2.16, section 4.3.5.3.6.

NO_x RACT Plan - Amendment 1

1. The oxides of nitrogen (NO_x, expressed as NO₂) emission from each utility boiler shall not exceed the rate as specified below, based upon a rolling 30-day average:
 - Unit 1 0.47 lb/mmBtu of heat input
 - Unit 2 0.47 lb/mmBtu of heat input
 - Unit 3 0.52 lb/mmBtu of heat input
 - Unit 4 0.52 lb/mmBtu of heat input
2. The NO_x emission rate for each utility boiler shall be determined using the methods and procedures specified in NO_x RACT Plan Appendix A - Amendment 1, except that any reference to an annual average shall be read as a rolling 30-day average.
3. The Louisville Gas and Electric Company Mill Creek Generating Station (LG&E/MCGS) shall install, maintain, and operate a NO_x continuous emissions monitoring system (CEMS) for each utility boiler and shall keep records and submit reports and other notifications as specified in NO_x RACT Plan Appendix A - Amendment 1.
4. The LG&E/MCGS shall keep a record identifying all deviations from the requirements of this NO_x RACT Plan and shall submit to the District a written report of all deviations that occurred during the preceding calendar quarter. The report shall contain the following information:
 - A. The boiler number,
 - B. The beginning and ending date of the reporting period,
 - C. Identification of all periods during which a deviation occurred,
 - D. A description, including the magnitude, of the deviation,
 - E. If known, the cause of the deviation, and
 - F. A description of all corrective actions taken to abate the deviation.If no deviation occurred during the calendar quarter, the report shall contain a negative declaration. Each report shall be submitted within 30 days following the end of the calendar quarter.
5. In lieu of the requirements in this NO_x RACT Plan, the LG&E/MCGS may comply with alternative requirements regarding emission limitations, equipment operation, test methods, monitoring, recordkeeping, or reporting, provided the following conditions are met:
 - A. The alternative requirements are established and incorporated into an operating permit pursuant to a Title V Operating Permit issuance, renewal, or significant permit revision process as established in Regulation 2.16,
 - B. The alternative requirements are consistent with the streamlining procedures and guidelines set forth in section II.A. of *White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, March 5, 1996, U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards. The overall effect of compliance with alternative requirements shall consider the effect on an intrinsic basis, such as pounds per million Btu of heat input. However, alternative requirements that are developed based upon revisions to the applicable requirements contained in

40 CFR Part 60 or Part 75 shall be approvable pursuant to this NO_x RACT Plan Element,

- C. The U.S. Environmental Protection Agency (EPA) has not objected to the issuance, renewal, or revision of the Title V Operating Permit, and either
- D. If the public comment period preceded the EPA review period, then the District had transmitted any public comments concerning the alternative requirements to EPA with the proposed permit, or
- E. If the EPA and public comment periods ran concurrently, then the District had transmitted any public comments concerning the alternative requirements to EPA no later than 5 working days after the end of the public comment period.

The District's determination of approval of any alternative requirements is not binding on EPA. Noncompliance with any alternative requirement established pursuant to the Title V Operating Permit process constitutes a violation of this NO_x RACT Plan.

History: Approved 11-8-99; effective 1-1-00; amended a1/10-18-00 effective 1-1-01.

**Appendix A to NO_x RACT Plan - Amendment 1
Requirements for NO_x CEMS**

I. General Operating Requirements

- A. Primary measurement requirements.** The LG&E/MCGS shall, for each utility boiler, install, certify, operate, and maintain, in accordance with the requirements of 40 CFR 75, an oxides of nitrogen (NO_x) continuous emission monitoring system (CEMS), consisting of a NO_x pollutant concentration monitor and an oxygen (O₂) or carbon dioxide (CO₂) diluent gas monitor, with an automated data acquisition and handling system for measuring and recording NO_x concentration (in parts per million [ppm]), O₂ or CO₂ concentration (in percent O₂ or CO₂) and NO_x emission rate (in lb/mmBtu of heat input) discharged to the atmosphere. Any reference in this Appendix to an annual average shall be read as a rolling 30-day average. The LG&E/MCGS shall account for total NO_x emissions, both nitrogen oxide (NO) and nitrogen dioxide (NO₂), either by monitoring for both NO and NO₂ or by monitoring for NO only and adjusting the emissions data to account for NO₂.
- B. Primary equipment performance requirements.** The LG&E/MCGS shall ensure that each CEMS used to demonstrate compliance with the NO_x emission limit meets the equipment, installation, and performance specifications in 40 CFR 75 Appendix A, and is maintained according to the quality assurance and quality control procedures in 40 CFR 75 Appendix B. The NO_x emission rate for each utility boiler shall be recorded as lb/mmBtu of heat input.
- C. Primary equipment hourly operating requirements.**
1. The LG&E/MCGS shall ensure that all CEMS are in operation and monitoring the emissions from the associated utility boiler at all times that the utility boiler combusts any fuel except during a period of any of the following:
 - a. Calibration, quality assurance, or preventive maintenance, any of which is performed pursuant to 40 CFR §75.21, 40 CFR 75 Appendix B, District regulations, District permit conditions, or this NO_x RACT Plan, or
 - b. Repair, backups of data from the data acquisition and handling system, or recertification, any of which is performed pursuant to 40 CFR §75.20.
 2. The LG&E/MCGS shall ensure that the following requirements are met:
 - a. Each CEMS and component thereof is capable of completing a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute interval. The LG&E/MCGS shall reduce all volumetric flow, CO₂ concentration, O₂ concentration, NO_x concentration, and NO_x emission rate data collected by the monitors to hourly averages. Hourly averages shall be computed using at least one data point in each 15-minute quadrant of an hour during which the utility boiler combusted fuel during that quadrant of the hour. Notwithstanding this requirement, an hourly

average may be computed from at least two data points separated by a minimum of 15 minutes (where the unit operates for more than one quadrant of the hour) if data are unavailable as a result of the performance of any activity specified in paragraph I.C.1. of this Appendix. The LG&E/MCGS shall use all valid measurements or data points collected during an hour to calculate the hourly averages. All data points collected during an hour shall be, to the extent practicable, evenly spaced over the hour.

- b. Failure of a CO₂ or O₂ diluent concentration monitor, flow monitor, or NO_x pollutant concentration monitor to acquire the minimum number of data points for calculation of an hourly average shall result in the failure to obtain a valid hour of data and the loss of such component data for the entire hour. An hourly average NO_x emission rate in lb/mmBtu of heat input is valid only if the minimum number of data points are acquired by both the pollutant concentration monitor (NO_x) and the diluent monitor (CO₂ or O₂). If a valid hour of data is not obtained, the owner or operator shall estimate and record emissions, moisture, or flow data for the missing hour by means of the automated data acquisition and handling system, in accordance with the applicable procedure for missing data substitution in 40 CFR 75 Subpart D .

- D. Optional backup monitor requirements.** If the LG&E/MCGS chooses to use two or more CEMS, each of which is capable of monitoring the same stack or duct at a specific utility boiler, then the LG&E/MCGS shall designate one CEMS as the primary monitoring system and shall record this designation in the monitoring plan. The LG&E/MCGS shall designate any other CEMS as a backup CEMS in the monitoring plan. Any other backup CEMS shall be designated as a redundant backup CEMS, non-redundant backup CEMS, or reference method CEMS, as described in 40 CFR §75.20(d). When the certified primary monitoring system is operating and not out-of-control as defined in 40 CFR §75.24, only data from the certified primary monitoring system shall be reported as valid, quality-assured data. Thus, data from a backup CEMS may be reported as valid, quality-assured data only when a backup CEMS is operating and not out-of-control as defined in 40 CFR §75.24 or in the applicable reference method in 40 CFR 60 Appendix A and when the certified primary monitoring system is not operating or is operating but out-of-control. A particular monitor may be designated both as a certified primary monitor for one unit and as a certified redundant backup monitor for another unit.
- E. Minimum measurement capability requirements.** Each CEMS and component thereof shall be capable of accurately measuring, recording, and reporting data, and shall not incur a full scale exceedance, except as provided in section 2.1.2.5 of 40 CFR 75 Appendix A.
- F.** The LG&E/MCGS shall not operate a utility boiler so as to discharge, or allow to be discharged, emissions of NO_x to the atmosphere without accounting for all such emissions in accordance with the methods and procedures specified in this Appendix.

- G.** The LG&E/MCGS shall not disrupt the CEMS, any portion thereof, or any other approved emission monitoring method, and thereby avoid monitoring and recording NO_x emissions discharged into the atmosphere, except for periods of recertification or periods when calibration, quality assurance testing, or maintenance is performed in accordance with the provisions of this Appendix.
- H.** The LG&E/MCGS shall not retire or permanently discontinue use of the CEMS, any component thereof, or any other approved emission monitoring system under this Appendix except under any one of the following circumstances:
1. The LG&E/MCGS is monitoring NO_x emissions from the utility boiler with another certified monitoring system approved in accordance with the provisions of paragraph I.D. of this Appendix, or
 2. The LG&E/MCGS submits notification of the date of certification testing of a replacement monitoring system.
- I.** The quality assurance and quality control requirements in 40 CFR §75.21 that apply to NO_x pollutant concentration monitors and diluent gas monitors shall be met. A NO_x pollutant concentration monitor for determining NO_x emissions shall meet the same certification testing requirements, quality assurance requirements, and bias test requirements as those specified in 40 CFR 75 for an SO₂ pollutant concentration monitor.
- J.** **Moisture correction.** If a correction for the stack gas moisture content is needed to properly calculate the NO_x emission rate in lb/mmBtu of heat input (i.e., if the NO_x pollutant concentration monitor measures on a different moisture basis from the diluent monitor), LG&E/MCGS shall either report a fuel-specific default moisture value for each utility boiler operating hour, as provided in 40 CFR §75.11(b)(1), or shall install, operate, maintain, and quality assure a continuous moisture monitoring system, as defined in 40 CFR §75.11(b)(2). Notwithstanding this requirement, if Equation 19-3, 19-4 or 19-8 in Method 19 in Appendix A to 40 CFR Part 60 is used to measure NO_x emission rate, the following fuel-specific default moisture percentages shall be used in lieu of the default values specified in 40 CFR §75.11(b)(1): 5.0%, for anthracite coal; 8.0% for bituminous coal; 12.0% for sub-bituminous coal; 13.0% for lignite coal; and 15.0% for wood.
- II. Specific Provisions for Monitoring NO_x Emission Rate (NO_x and diluent gas monitors)**
- A.** The LG&E/MCGS shall meet the general operating requirements in 40 CFR §75.10 for a NO_x CEMS for each utility boiler. The diluent gas monitor in the NO_x CEMS may measure either O₂ or CO₂ concentration in the flue gases.
- B.** The LG&E/MCGS shall calculate hourly and rolling 30-day NO_x emission rates (in lb/mmBtu of heat input) by combining the NO_x concentration (in ppm), diluent concentration (in percent O₂ or CO₂), and percent moisture (if applicable) measurements according to the procedures in 40 CFR 75 Appendix F.

III. Monitoring plan

The LG&E/MCGS shall prepare and maintain a monitoring plan as specified in 40 CFR 75.53. The monitoring plan shall be submitted to the District no later than 45 days prior to the first scheduled certification test.

IV. Recordkeeping Provisions

- A.** The LG&E/MCGS shall maintain for each utility boiler a file of all measurements, data, reports, and other information required by this Appendix at the stationary source in a form suitable for inspection for at least 5 years from the date of each record. This file shall contain the following information:
1. The data and information required in paragraph IV.B. of this Appendix,
 2. The component data and information used to calculate values required in paragraph IV.B. of this Appendix,
 3. The current monitoring plan as specified in 40 CFR §75.53, and
 4. The quality control plan as described in 40 CFR 75 Appendix B.
- B. NO_x emission record provisions.** The LG&E/MCGS shall record hourly the following information as measured and reported from the certified primary monitor, certified back-up or certified portable monitor, or other approved method of emissions determination for each utility boiler:
1. Date and hour,
 2. Hourly average NO_x concentration (ppm, rounded to the nearest tenth),
 3. Hourly average diluent gas concentration (percent O₂ or percent CO₂, rounded to the nearest tenth),
 4. Hourly average NO_x emission rate (lb/mmBtu of heat input, rounded to nearest hundredth),
 5. Hourly average NO_x emission rate (lb/mmBtu of heat input, rounded to nearest hundredth) adjusted for bias, if a bias adjustment factor is required by 40 CFR §75.24 (d),
 6. Percent monitoring system data availability (recorded to the nearest tenth of a percent), calculated pursuant to 40 CFR §75.32,
 7. Method of determination for hourly average NO_x emission rate using Codes 1-55 in 40 CFR §75.57 Table 4A, and
 8. Unique code identifying emissions formula used to derive hourly average NO_x emission rate, as provided for in 40 CFR §75.53.

V. Certification, Quality Assurance, and Quality Control Record Provisions

- A.** For each NO_x pollutant concentration monitor and diluent gas monitor, the LG&E/MCGS shall record the following:
1. Results of all trial runs and certification tests and quality assurance activities and measurements (including all reference method field test sheets, charts, records of combined system responses, laboratory analyses, and example

- calculations) necessary to substantiate compliance with all relevant requirements of this Appendix,
2. Bias test results as specified in 40 CFR 75, Appendix A, section 7.6.4,
 3. The appropriate bias adjustment factor as follows:
 - a. The value derived from Equations A-11 and A-12 in 40 CFR 75 Appendix A for any monitoring system or component that failed the bias test, or
 - b. A value of 1.0 for any monitoring system or component that passed the bias test, and
 4. The component/system identification code.
- B.** For each NO_x pollutant concentration monitor and diluent gas monitor, the LG&E/MCGS shall record the following for all daily and 7-day calibration error tests, including any follow-up tests after corrective action:
1. Instrument span and span scale,
 2. Date and hour,
 3. Reference value (i.e., calibration gas concentration or reference signal value, in ppm or other appropriate units),
 4. Observed value (monitor response during calibration, in ppm or other appropriate units), (flag if using alternative performance specification for low emitters or differential pressure monitors),
 5. Percent calibration error (rounded to the nearest tenth of a percent),
 6. Calibration gas level,
 7. Test number and reason for test,
 8. For 7-day calibrations tests for certification or recertification, a certification from the cylinder gas vendor or CEMS vendor that calibration gases as defined in 40 CFR §72.2 and 40 CFR 75 Appendix A were used to conduct calibration error testing,
 9. Description of any adjustments, corrective actions, or maintenance following a test,
 10. For quality test for off-line calibration, whether the unit is off-line or on-line, and
 11. The component/system identification code.
- C.** For each NO_x pollutant concentration monitor and diluent gas monitor, the LG&E/MCGS shall record the following for the initial and all subsequent linearity checks, including any follow-up tests after corrective action:
1. Instrument span and span scale,
 2. Calibration gas level,
 3. Date, hour, and minute of each gas injection at each calibration gas level,
 4. Reference value (i.e., reference gas concentration for each gas injection at each calibration gas level, in ppm or other appropriate units),
 5. Observed value (monitor response to each reference gas injection at each calibration gas level, in ppm or other appropriate units),
 6. Mean of reference values and mean of measured values at each calibration gas level
 7. Linearity error at each of the reference gases concentrations (rounded to the nearest tenth of a percent), (flag if using alternative performance specification),

8. Test number and reason for test (flag if aborted test),
 9. Description of any adjustments, corrective action, or maintenance prior to a passed test or following a failed test,
 10. The number of out-of-control hours, if any, following any tests, and
 11. The component/system identification code.
- D.** For each NO_x pollutant concentration monitor and diluent gas monitor, the LG&E/MCGS shall record the following information for the initial and all subsequent relative accuracy tests and test audits:
1. Reference method(s) used,
 2. Individual test run data from the relative accuracy test audit for the NO_x pollutant concentration monitor or diluent gas monitor, including:
 - a. Date, hour, and minute of beginning of test run,
 - b. Date, hour, and minute of end of test run,
 - c. Monitoring system identification code,
 - d. Test number and reason for test,
 - e. Operating load level (low, mid, high, or normal, as appropriate) and number of load levels comprising test,
 - f. Normal load indicator for flow RATAs (except for peaking units),
 - g. Units of measure,
 - h. Run number,
 - i. Run data from CEMS being tested, in the appropriate units of measure,
 - j. Run data for reference method, in the appropriate units of measure,
 - k. Flag value (0, 1, or 9, as appropriate) indicating whether run has been used in calculating relative accuracy and bias values or whether the test was aborted prior to completion,
 - l. Average gross unit load (expressed as a total gross unit load rounded to the nearest MWe or as steam load rounded to the nearest thousand lb/hr), and
 - m. Flag to indicate whether an alternative performance specification has been used,
 3. Calculations and tabulated results, as follows:
 - a. Arithmetic mean of the monitoring system measurement values, reference method values, and of their differences, as specified in Equation A-7 in 40 CFR 75 Appendix A,
 - b. Standard deviation, as specified in Equation A-8 in 40 CFR 75 Appendix A,
 - c. Confidence coefficient, as specified in Equation A-9 in 40 CFR 75 Appendix A,
 - d. Statistical “t” value used in calculations,
 - e. Relative accuracy test results, as specified in Equation A-10 in 40 CFR 75 Appendix A,
 - f. Bias test results as specified in section 7.6.4 in 40 CFR 75 Appendix A,
 - g. Bias adjustment factor from Equation A-12 in 40 CFR 75 Appendix A for any monitoring system or component that failed the bias test (except as otherwise provided in section 7.6.5 in 40 CFR 75 Appendix A) and 1.000 for any monitoring system or component that passed the bias test,
 - h. F-factor value(s) used to convert NO_x pollutant concentration and diluent gas (O₂ or CO₂) concentration measurements into NO_x emission rates (in lb/mmBtu),
 - i. The raw data and calculated results for any stratification tests performed in accordance with sections 6.5.6.1 through 6.5.6.3 in 40 CFR 75 Appendix A, and

- j. For moisture monitoring systems, the coefficient “K” factor or other mathematical algorithm used to adjust the monitoring system with respect to the reference method,
4. Description of any adjustment, corrective action, or maintenance prior to a passed test or following a failed or aborted test,
5. For each run of each test using Method 7E or 3A in Appendix A of 40 CFR 60 to determine NO_x, CO₂, or O₂ concentration the following:
 - a. Pollutant or diluent gas being measured,
 - b. Span of reference method analyzer,
 - c. Type of reference method system (e.g., extractive or dilution type),
 - d. Reference method dilution factor (dilution type systems, only),
 - e. Reference gas concentration (low, mid, and high gas levels) used for the 3-point, pre-test analyzer calibration error test (or, for dilution type reference method systems, for the 3-point, pre-test system calibration error test) and for any subsequent recalibrations,
 - f. Analyzer responses to the zero-, mid-, and high-level calibration gases during the 3-point pre-test analyzer (or system) calibration error test and during any subsequent recalibration(s),
 - g. Analyzer calibration error at each gas level (zero, mid, and high) for the 3-point, pre-test analyzer (or system) calibration error test and for any subsequent recalibration(s) (percent of span value),
 - h. Upscale gas concentration (mid or high gas level) used for each pre-run or post-run system bias check or, for dilution type reference method systems, for each pre-run or post-run system calibration error check,
 - i. Analyzer response to the calibration gas for each pre-run or post-run system bias (or system calibration error) check,
 - j. The arithmetic average of the analyzer responses to the zero-level gas, for each pair of pre- and post-run system bias (or system calibration error) checks,
 - k. The arithmetic average of the analyzer responses to the upscale calibration gas, for each pair of pre- and post-run system bias (or system calibration error) checks,
 - l. The results of each pre-run and each post-run system bias (or system calibration error) check using the zero-level gas (percentage of span value),
 - m. The results of each pre-run and each post-run system bias (or system calibration error) check using the upscale calibration gas (percentage of span value),
 - n. Calibration drift and zero drift of analyzer during each RATA run (percentage of span value),
 - o. Moisture basis of the reference method analysis,
 - p. Moisture content of stack gas, in percent, during each test run (if needed to convert to moisture basis of CEMS being tested),
 - q. Unadjusted (raw) average pollutant or diluent gas concentration for each run,
 - r. Average pollutant or diluent gas concentration for each run, corrected for calibration bias (or calibration error) and, if applicable, corrected for moisture,
 - s. The F-factor used to convert reference method data to units of lb/mmBtu (if applicable)
 - t. Date(s) of the latest analyzer interference test(s),

- u. Results of the latest analyzer interference test(s),
 - v. Date of the latest NO₂ to NO conversion test (Method 7E only),
 - w. Results of the latest NO₂ to NO conversion test (Method 7E only), and
 - x. For each calibration gas cylinder used during each RATA, record the cylinder gas vendor, cylinder number, expiration date, pollutant(s) in the cylinder, and
- 6. The number of out-of-control hours, if any, following any tests, and
 - 7. The component/system identification code.

VI. Notifications

- A. The LG&E/MCGS or a designated representative shall submit notice to the District for the following purposes, as required by this Appendix:
 - 1. Initial certification and recertification test notifications. Written notification shall be submitted of initial certification tests, recertification tests, and revised test dates as specified in 40 CFR §75.20 for continuous emission monitoring systems, except for testing only of the data acquisition and handling system, and
 - 2. Notification of initial certification testing. Initial certification test notifications shall be submitted not later than 45 days prior to the first scheduled day of initial certification testing. Testing may be performed on a date other than that already provided in a notice under this subparagraph as long as notice of the new date is provided either in writing or by telephone or other means at least 7 days prior to the original scheduled test date or the revised test date, whichever is earlier.
- B. For retesting following a loss of certification under 40 CFR §75.20(a)(5) or for recertification under 40 CFR §75.20(b), notice of testing shall be submitted either in writing or by telephone at least 7 days prior to the first scheduled day of testing, except that in emergency situations when testing is required following an uncontrollable failure of equipment that results in lost data, notice shall be sufficient if provided within 2 business days following the date when testing is scheduled. Testing may be performed on a date other than that already provided in a notice under this subparagraph as long as notice of the new date is provided by telephone or other means at least 2 business days prior to the original scheduled test date or the revised test date, whichever is earlier.
- C. Notwithstanding the notice requirements of paragraph B. above, the LG&E/MCGS may elect to repeat a certification test immediately, without advance notification, whenever the LG&E/MCGS has determined during the certification testing that a test was failed or that a second test is necessary in order to attain a reduced relative accuracy test frequency.
- D. Written notice shall be submitted, either by mail or facsimile, of the date of periodic relative accuracy testing performed under 40 CFR Part 75 Appendix B no later than 21 days prior to the first scheduled day of testing. Testing may be performed on a date other than that already provided in a notice under this subparagraph as long as notice of the new date is provided either in writing or by telephone or other means acceptable to the District, and the notice is provided as soon as practicable after the new testing date is known, but no later than 24 hours in advance of the new date of testing.

- E.** Notwithstanding the notice requirements under paragraph D. above, the LG&E/MCGS may elect to repeat a periodic relative accuracy test immediately, without additional notification whenever the LG&E/MCGS has determined that a test was failed, or that a second test is necessary in order to attain a reduced relative accuracy test frequency. If an observer from the District is present when a test is rescheduled, the observer may waive all notification requirements under paragraph D. above for the rescheduled test.

VII. Quarterly reports

- A.** The LG&E/MCGS shall, within 30 days following the end of each calendar quarter, submit a report to the District that includes the following data and information for each utility boiler:
 - 1. The information and hourly data required in this Appendix, including all emissions and quality assurance data, and
 - 2. Average NO_x emission rate (lb/mmBtu of heat input, rounded to the nearest hundredth) during the rolling 30-day averaging periods.
- B.** The LG&E/MCGS shall submit a certification in support of each quarterly emissions monitoring report. This certification shall indicate whether the monitoring data submitted were recorded in accordance with the requirements of this Appendix. In the event of any missing data periods, this certification shall include a description of the measures taken to minimize or eliminate the causes for the missing data periods.

Revised Board Order Dated February 20, 2002

1. LG&E shall continue to convert all four units of the Mill Creek Generating Station (Station) to wet stack operation as required by the March 21, 2001, Board Order, except that the following completion dates shall apply in lieu of the dates set forth in paragraph 2 of the March 21, 2001, Order:

<u>Milestone</u>	<u>Completion Date</u>
Unit 2 conversion	Completed
Unit 4 conversion	Completed
Unit 3 conversion (phase 1)	May 31, 2002
Unit 1 conversion	February 28, 2003
Unit 3 conversion (phase 2)	May 31, 2004

2. To address the safety concerns identified from the completed conversions, the Unit 3 conversion will be divided into two phases. In Phase 1, LG&E shall line the stack with a high-grade stainless steel alloy, install a new lined stack bottom, install water collection devices and a drain system in the upper portion of the stack, weld bypass dampers to a closed position, and install new mist eliminators and wash system. In Phase 2, LG&E shall remove the stack plume reheater and install water collection devices and a drain system in the lower portion of the stack. LG&E shall continue to operate the Unit 3 stack plume reheater until its removal in Phase 2 of the Unit 3 conversion.
3. LG&E shall monitor and review the six-minute average opacity values and the flue gas hourly temperature values in the stack to determine if there has been a degradation of the reheater efficiency. If there appears to be a decrease in the reheater efficiency, an inspection of the reheater shall be performed expeditiously to determine the problem.
4. The protection from enforcement actions, notices of violation, civil penalties, and other legal actions extended to LG&E pursuant to paragraph 5 of the March 21, 2001 Board Order shall terminate upon completion of the Unit 1 conversion or by February 28, 2003, whichever is sooner.
5. This amended Board Order shall not be deemed or construed to be a determination by the District of a violation of any federal, state, or local statute, regulation, or ordinance for any purpose whatsoever. Nothing in this Board Order shall be construed as an admission of any violation by LG&E or a waiver of any defenses available to LG&E. By consenting to the terms of this Board Order, LG&E shall not be denied the benefit of any approved amendment or modification of applicable law or regulation. LG&E reserves the right to contest, through administrative or judicial action, all determinations of the District made pursuant to this Board Order.
6. LG&E has reviewed this Board Order and consents to all its requirements and terms. Further, LG&E agrees to pay the costs of publishing legal notice of the public hearing.

7. In the event that it becomes necessary for the District to seek a court order to enforce this Board Order, LG&E agrees to pay the filing fees and costs of any such action.

Dated this 20th day of February, 2002.



**TITLE IV
PHASE II ACID RAIN PERMIT**

Permit No. 176-97-AR (R2) Plant ID 0127

Effective Date December 31, 2002 Expiration Date December 31, 2007

SIC Code 4911 ORIS Code 1364

Permission is hereby given by the Air Pollution Control District of Jefferson County to operate a Phase II Acid Rain Source located at:

**Louisville Gas and Electric- Mill Creek Station
14660 Dixie Highway
Louisville, KY 40272**

Statutory and Regulatory Authorities: In accordance with KRS Chapter 77 and Titles IV and V of the Clean Air Act, the Air Pollution Control District of Jefferson County issues this permit pursuant to Regulations 2.16, 6.47, and 7.82.

Designated Representative **Chris Hermann**

Alternate Designated Representative **John N. Voyles, Jr.**

Date Application Received **December 13, 1995**

Reviewing Engineer (61)

Air Pollution Control Officer

Acid Rain Permit Revisions/Changes

Revision No.	Date of Reissuance	Public Notice Date	Type	Emission Unit/Page No.	Description
Initial	12/17/1997	NA	Initial	Entire Permit	Entire Permit
Rev. 1	12/31/1998	NA	Significant	Entire Permit	Added language and SO ₂ allowances to the tables for each unit
Rev. 2	06/01/2003	NA	Reissuance	Entire Permit	Reissuance of the permit

**SO₂ Allowance Allocations and NO_x Requirements
for each affected unit**

	1998	1999	2000	2001	2002-2007	
Unit 1	SO ₂ allowances, under Tables 2, 3, or 4 of 40 CFR part 73.	NA	NA	8018*	8018*	8018*
	NO _x Limit	<p>Pursuant to 40 CFR 76.8(d)(2), the Air Pollution Control District of Jefferson County approves a NO_x early election compliance plan for Unit 1. The compliance plan is effective for calendar year 2000 through calendar year 2007. Under the compliance plan, this unit's annual average NO_x emission rate for each year, determined in accordance with 40 CFR part 75, shall not exceed the applicable emission limitation, under 40 CFR 76.5(a)(1) of 0.45 lb/MMBtu for tangentially fired boilers. If the unit is in compliance with its applicable emission limitation for each year of the plan, then the unit shall not be subject to the applicable emission limitation, under 40 CFR 76.7(a)(1), of 0.40 lb/MMBtu until calendar year 2008.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>				

**SO₂ Allowance Allocations and NO_x Requirements
for each affected unit**

	1998	1999	2000	2001	2002-2007	
Unit 2	SO ₂ allowances, under Tables 2, 3, or 4 of 40 CFR part 73.	NA	NA	8075*	8075*	8075*
	NO _x Limit	<p>Pursuant to 40 CFR 76.8(d)(2), the Air Pollution Control District of Jefferson County approves a NO_x early election compliance plan for Unit 2. The compliance plan is effective for calendar year 2000 through calendar year 2007. Under the compliance plan, this unit's annual average NO_x emission rate for each year, determined in accordance with 40 CFR part 75, shall not exceed the applicable emission limitation, under 40 CFR 76.5(a)(1) of 0.45 lb/MMBtu for tangentially fired boilers. If the unit is in compliance with its applicable emission limitation for each year of the plan, then the unit shall not be subject to the applicable emission limitation, under 40 CFR 76.7(a)(1), of 0.40 lb/MMBtu until calendar year 2008.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>				

**SO₂ Allowance Allocations and NO_x Requirements
for each affected unit**

	1998	1999	2000	2001	2002-2007	
Unit 3	SO ₂ allowances, under Tables 2, 3, or 4 of 40 CFR part 73.	NA	NA	10888*	10888*	10888*
	NO _x Limit	<p>Pursuant to 40 CFR 76.8(d)(2), the Air Pollution Control District of Jefferson County approves a NO_x early election compliance plan for Unit 3. The compliance plan is effective for calendar year 2000 through calendar year 2007. Under the compliance plan, this unit's annual average NO_x emission rate for each year, determined in accordance with 40 CFR part 75, shall not exceed the applicable emission limitation, under 40 CFR 76.5(a)(2) of 0.50 lb/MMBtu for dry bottom wall-fired boilers. If the unit is in compliance with its applicable emission limitation for each year of the plan, then the unit shall not be subject to the applicable emission limitation, under 40 CFR 76.7(a)(2), of 0.46 lb/MMBtu until calendar year 2008.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>				

**SO₂ Allowance Allocations and NO_x Requirements
for each affected unit**

	1998	1999	2000	2001	2002-2007	
Unit 4	SO ₂ allowances, under Tables 2, 3, or 4 of 40 CFR part 73.	NA	NA	13506*	13506*	13506*
	NO _x Limit	<p>Pursuant to 40 CFR 76.8(d)(2), the Air Pollution Control District of Jefferson County approves a NO_x early election compliance plan for Unit 4. The compliance plan is effective for calendar year 2000 through calendar year 2007. Under the compliance plan, this unit's annual average NO_x emission rate for each year, determined in accordance with 40 CFR part 75, shall not exceed the applicable emission limitation, under 40 CFR 76.5(a)(2) of 0.50 lb/MMBtu for dry bottom wall-fired boilers. If the unit is in compliance with its applicable emission limitation for each year of the plan, then the unit shall not be subject to the applicable emission limitation, under 40 CFR 76.7(a)(2), of 0.46 lb/MMBtu until calendar year 2008.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>				

*The number of allowances actually held by an affected source in a unit account may differ from the number allocated by U.S. EPA. Neither of the aforementioned conditions necessitate a revision to the unit SO₂ allowance allocations identified in this permit (See 40 CFR 72.84). The number of allowances allocated to Phase II affected units by US EPA may change under 40 CFR part 73.

Comments, Notes, and Justifications:

None

Permit Application:

The Louisville Gas & Electric Company Phase II Permit Application for the Mill Creek Generating Station, dated December 7, 1995, and signed by Chris Hermann, is attached hereto and is rendered part of this permit. The owners and operators of Louisville Gas and Electric Company must comply with the standard requirements and special provisions set forth in the application.

NO_x Compliance Plan:

The Louisville Gas & Electric Company Phase II NO_x Compliance Plan, dated December 22, 1997 and signed by John N Voyles, Jr. is attached hereto and is rendered part of this permit. The owners and operators of Louisville Gas & Electric Company must comply with the early election standard annual average NO_x emission limitation of 0.45 lb/MMBtu for Phase I tangentially fired boilers and 0.50 lb/MMBtu for Phase I dry bottom wall-fired boilers each year until calendar year 2008, unless the early election option is terminated.